MOTOR TREND

The Magazine for a Motoring World

FEBRUARY 1952 25c

CHRYSLER SCORES FIRST!

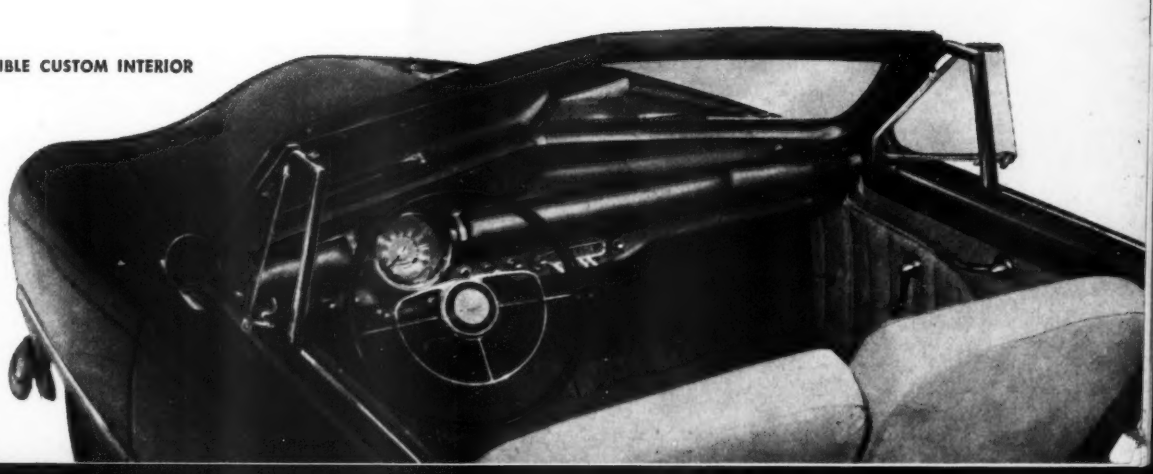
15 Stock Cars Rated in Engineering Award Chart

SEE HOW YOUR CAR COMPARES

ASTON MARTIN DB-2 COUPE

STENGEL-COACHCRAFT COUPE DE VILLE

CONVERTIBLE CUSTOM INTERIOR

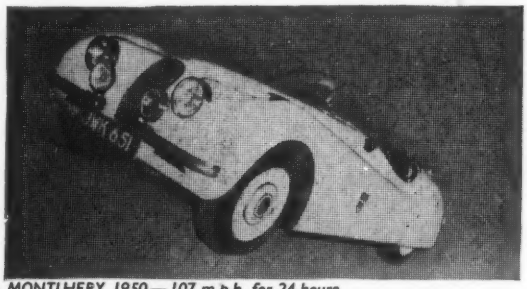


SOME OUTSTANDING VICTORIES AND ACHIEVEMENTS

JABBEKE (BELGIUM) 1949 (132·6 m.p.h. — flying mile)

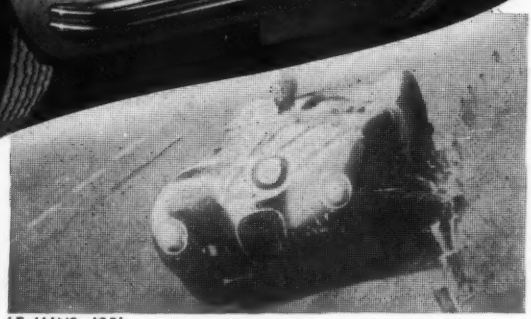
ALPINE TRIAL, 1950—1951

SILVERSTONE 1949—1951



MONTLHERY 1950 — 107 m.p.h. for 24 hours
1951 — 131·8 miles in 1 hour

R.A.C. TOURIST TROPHY (N. Ireland) 1950—1951



LE MANS, 1951

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XK SUPER SPORTS

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H-W*

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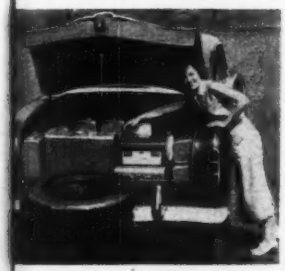

...h spare wheel mounted outside, tire ...anging is simplified and the trunk gains ...% to 50% more usable luggage space. ...eal convenience feature.

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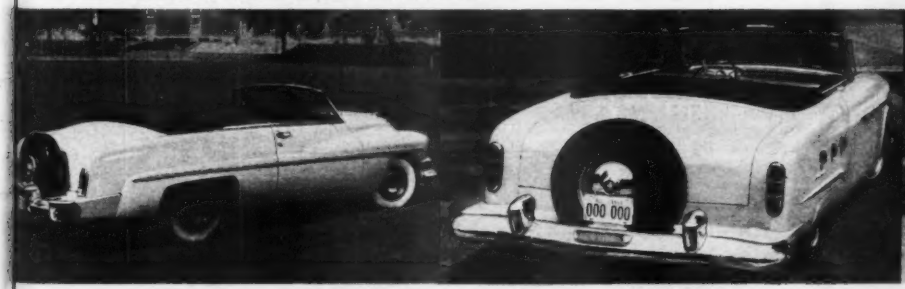

MERCURY

PACKARD

FORD

OLDSMOBILE 88 SUPER

LINCOLN (except Cosmopolitan)

KAISER

MOTOR TREND

THE MAGAZINE FOR A MOTORING WORLD

FEBRUARY 1952 Published Monthly VOL. 4 • No. 2

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FEATURES:

DEPARTMENTS:

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Next Month . . .

CUSTOMS

IN THE MARCH issue, the most famous names in California customs—the men who, for the past 10 or 15 years, have been the top producers in the field and the shapers of what has come to pass—will air their views on what have been the failures and successes of the past and on what you can expect to see happen in the immediate future. This will be a sweeping survey of expert opinion, a summary by the best brains of where we stand today and where creative American body design is headed. Don't miss this top-flight feature which tells why the customizers want to improve on Detroit—and on their own efforts, too.

MEXICAN ROAD RACE

MARCH'S MOTOR TREND—you can spot it by Reynold Brown's fine cover painting of a Mexican Road Race scene of a red Ferrari chasing a yellow Chrysler through the jungle—will carry on-the-spot coverage of the Second Carrera Panamericana by our own Eric Rickman. Backing him up are ace Mexico City reporters Art Geiger and M. B. Wilhelm. "Rick" knows his cars, modified stocks above all—and he traveled right with the top talent all the way.

INCOME TAX

IF YOU DRIVE a car and if you pay income tax—how many Americans fail to fit those spex?—this is a feature that you won't want to miss. It covers every car owner from the operator of the every-day stock job to the race driver to the customizer. We're chasing down the *facts* about which deductions you're entitled to make and which ones the government will not allow. Don't file any return until you've read this—it will tell *you* where you and your car stand when tax filing time rolls around.

LE BARON STORY

IN THE NEIGHBORING village of Pasadena, Ralph Roberts is working on a Fiberglas sport custom body to sell to anyone who wants a trim two-seater for less than $1000. You'll read about this in our April issue. For the March issue, Ralph has promised to tell the story of LeBaron, one of the foremost body-building firms of the classic period. He was a director of the company when such memorable cars as the Chrysler Thunderbolt and the Packard Speedster were built.

OUR COVER

To Eric Rickman goes the credit for the color shots of Phil Hill's Aston-Martin (page 24), and of Ran Wilbourn's superb custom Ford (page 30). Felix Zelenka took the broadside of Peter Stengel's striking, veteran *sedanca* (page 38).

READER REFLECTIONS

NASH ROAD TEST

Gentlemen:

After reading your "Nash Ambassador Motor Trial" in the December issue, I'd like to register a complaint. I've been under the misguided impression that one of the purposes of these tests was to give the reader an idea of top performance capabilities in each car; particularly the tests for top speed, acceleration, and gasoline economy. This cannot be accomplished as long as the cars tested are equipped with Hydra-Matic or one of the other gas gobblers. Naturally when an automatic transmission is standard equipment there is no alternative, but when a car can be obtained with standard transmission, it should be used.

In almost every "Motor Trial" where an automatic transmission is used, you state that better results can be obtained with syncro-mesh or overdrive, so how about giving these cars a fair shake and testing them that way? Then a separate test could be run using the automatic transmission. I think the readers would be interested in knowing just how much difference there is.

In conclusion, I would like to use your "Studebaker V-8 Motor Trial" in the June issue as an example. In this article you state: "Acceleration: This factor of the Studebaker V-8 is not its outstanding feature, but it is quite good." This is the understatement of the year. Equipped with overdrive, this car can show its tail lights to practically any other stock car produced in this country. Upon accelerating, it will literally pin you to the back of the seat until you ease up on the throttle.

Incidentally, I don't own a Studie V-8, just a Champion.

Willard E. Cohen
Chicago, Ill.

—Overdrive is scarcely the gearing gimmick to give you best acceleration. MOTOR TREND'S policy has been to give credit to the convenience advantages of automatic transmissions, while calling attention to the price the buyer pays in terms of overall efficiency. For the "mass motorist" we feel that automatic transmissions are a boon. For the driver who enjoys machinery, they're both amusing and sad. We test those versions of each car which are most popular with the public.

NO HOT ROD FOR DAD

Gentlemen:

Being a steady reader of your magazine, it is only natural that when a question arises on which I cannot find the answer, I should think of you for advice.

Quite some time ago I read that someone was working on the development of a tailpipe muffler that would resemble the conventional exhaust extension in appearance. As I remember, it could be used with a straight pipe exhaust and had a control valve to cut the muffler in or out.

I am very interested in finding out if anyone has perfected it, obtaining specifications and price.

Such a device would be just what the doctor ordered for me. I have a Ford conv., also an eighteen year old son. The Porter Hollywood muffler which he has installed on the family bus makes sweet music to his teenage ears, I'm not such an old fogy that I can't appreciate its merits, but in congested areas I find folks staring at me perhaps wondering if the old fellow isn't indulging in compensation for a frustrated youth.

Now the boy has saved his money for a set of headers and duals.

If you are able to advise me where to purchase such a device as I have described, I'll buy two of them, one for each tail pipe. If not, being an engineer, I'll start designing my own version.

E. P. Davies
Bala-Cynwyd, Penna.

—Sorry, you'll have to buckle down to the drafting board. Not even the editors of Hot Rod magazine know of such a gadget.

RE-CORRECTING THE SPEEDOMETER

Gentlemen:

In your December issue you told reader Blikre that since the speedometer and odometer were both driven by the same gear, the error would be consistent for both. This is incorrect. True enough, they are driven by the same gear, but this isn't where the error arises. The main source of error in speedometers is caused by insufficient strength in the magnetic rotor of the instrument which lets the needle lag behind. This condition can be corrected in any speedometer shop with an especially constructed electric magnet and a tachometer.

The error in odometer readings is caused by varying tire size due to improper inflation, expansion at higher speeds, or tire wear. It is usually very small, rarely exceeding one or two miles for each 100 miles traveled. This would give a maximum of two per cent error as compared with up to 13 per cent in the speedometer of some of our reputedly fast inverted bathtubs. Yours for better cars and more racing.

Philip S. Hurd
Tucson, Ariz.

SON OF THE BEARCAT

Gentlemen:

After Harry Stutz sold out his Bearcat he built a similar speedwagon which was quite some buggy. Let's have a picture and some dope on it.

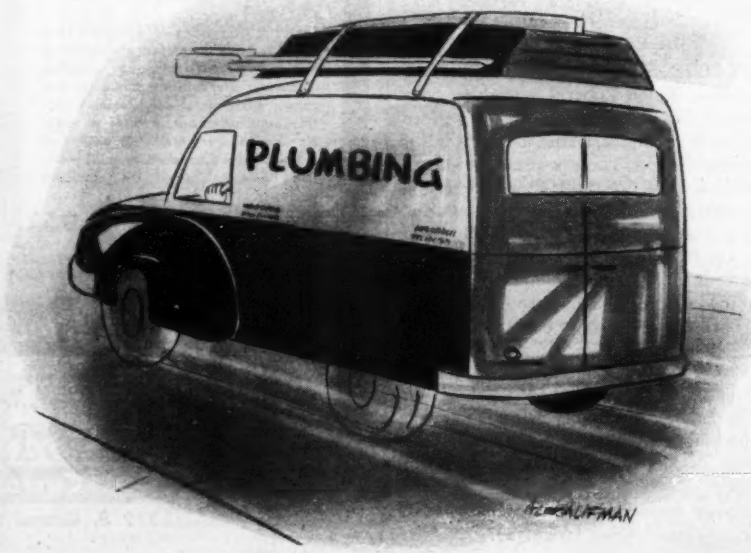
An Old Bearcat.

—We'll do just that in the near future, old cat.

A POX ON THE CORD-MERC

Gentlemen:

I was told the other day that the December issue of MOTOR TREND had a feature article about a Cord car. Being a Cord owner, I dashed right off to the newsstand and picked up a copy. I went through the pages quite fast to find this article and to my



utter surprise and disgust, what did I find? A story, complete with pictures of the most thorough "butchering" of a classic car which I have had the misfortune of seeing.

Adding insult to injury, the writer has complained about the cost of parts for the Cord and also said that the Cord engine was too temperamental. He lists Cord cylinder heads at $35 each. Did he purchase the finned aluminum heads on his Mercury engine on sale at Woolworth's for $4.98. I think not. Also that dual manifold, is that a five and ten special too? And as for being temperamental, I am sure that anyone who has worked on both, will agree that the Cord engine is no more temperamental than any dual carburetor Mercury.

How about another story telling us Cord owners how much this car cost? Can it be possible that the owner spent less money in installing a Mercury engine than a factory rebuilt Cord engine (new heads and all). I hardly think so.

I can agree that $94 for a set of pistons and rings is a lot of money. In '37 the supercharged Cord sedan delivered at the factory for $2495, and you could take away a new Cadillac at Detroit for $1545. One certainly cannot buy parts for a car such as this for peanuts.

I admire you Ford enthusiasts for the ambition and initiative you show in installing Ford engines in everything from airplane belly tanks to Greyhound busses, but be fair to the Cord car and Cord enthusiasts. I have yet to see any American car better the official AAA closed car (unlimited) speed record of 107.7 mph set back in '37 by a supercharged Cord sedan and also a record of 101.8 mph for 2500 miles run in approximately 24 hours. Is such a car troublesome and temperamental?

I would suggest that you remove all the Cord name plates for I feel sure no Cord owner would want "it" placed in the same category as his car. However, it would be to no avail as the styling and character which the Cord car possesses will forever identify it as a Cord.

How about a feature article on the stock Cord in an early issue so that more people may get to know this great car.

Harold Jornt
Kenosha, Wisc.

—Personally, we're neutral. However, many Cord owners have switched over to other engines, and rear-wheel drive. Must be something troublesome about that engine.

"DISHED" PISTONS

Gentlemen:

The hemispherical combustion chamber which the Chrysler engine now uses is without a doubt a great improvement in volumetric efficiency but entails the use of quite a complicated valve mechanism due to their inclination. What would be wrong with using a head with flat mating surface and putting the combustion chamber in the piston itself as is done in a great many diesel engines. All diesels are I head-designed and are famous for volumetric efficiency and also high compression and I've never seen an automotive type diesel as complicated-looking as that Chrysler valve arrangement.

J. C. McCoy
Findlay, Ohio

—Most of the efficiency of the diesel cycle is a function of the ultra-high compression which is its outstanding characteristic. "Diesel efficiency" is accompanied by "diesel roughness." The concave-head piston has been used, in car engines, without interesting results. One advantage of the hemispherical combustion chamber which the "dished piston" design can't offer is the STRAIGHTEST possible path for the gases to follow as they move through the engine. The fact that all true high-performance engines for at least the last couple of decades have used hemispherical chambers is good testimony of their superlative efficiency.

FIBERGLAS

Gentlemen:

The interesting article on "Fiberglas Sports Car" by Eric Irwin in your November 1951 issue has been called to our attention and we appreciate the editorial interest that it reflects in the use of Fiberglas reinforcements for plastic laminated materials.

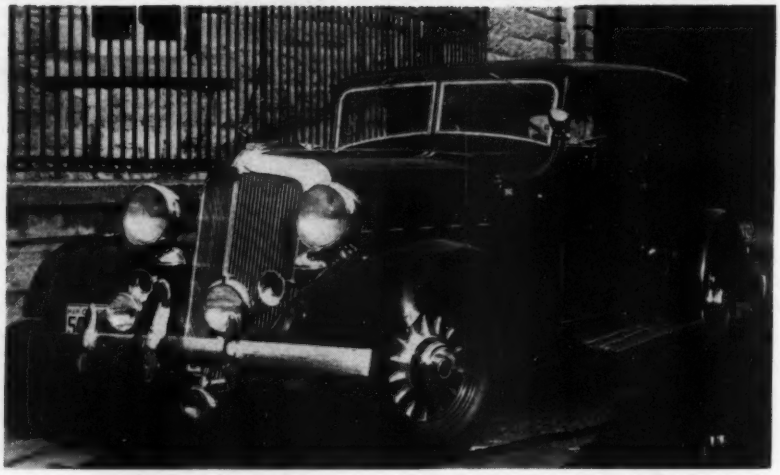
One point in the article, however, gives us pause. That is the statement, on page 19: "When the plastic has set firmly, smooth the unevenness of the cloth butts and plastic runs with a disc grinder. WEAR RESPIRATOR at all times when you are grinding. Fiberglas is GLASS. It doesn't mix with lungs!"

The possibility that lung damage may result from exposure to glass in fiber form has been the subject of intensive investigation. In the middle '30s, over a seven-year period, an investigation was conducted by Dr. Leroy U. Gardner at Saranac Laboratory at Saranac Lake, New York. This consisted of ingestion, injection and inhalation experiments. In his 1941 report as director of the Trudeau Sanitarium Dr. Gardner reported that exposure to the dust of glass fibers involves no hazard to the lungs "because this fibrous material is not inhalable." This finding has been universally accepted as authoritative by public health authorities, by insurance underwriters, and by industrial hygienists, safety engineers, and others who have concerned themselves with the subject. A further discussion is to be found in the enclosed

(*Continued on page thirteen*)

RANDOM SHOTS...

photos from our readers

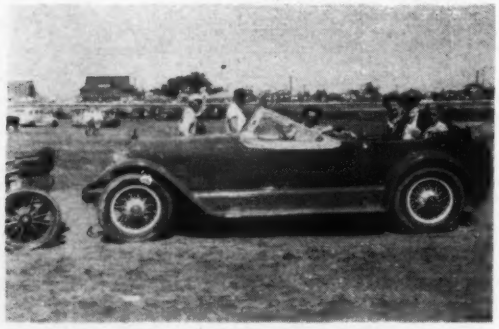


". . . This car is a '33 Chrysler Imperial Eight with the engine bored out .050-inch. The body was styled by a Canadian firm and weighs 4,460 pounds empty. The engine boasts nine main bearings of bronze. It has been clocked by the AAA at 104.93 mph."—Bob Crawford, Portland, Ore.

". . . The spare hump on my '50 Olds 88 is a '39 Cadillac spare-tire cover leaded in just for looks. The tire is in its original position. Deck lid is electrically operated from the dash."
—D. J. Wilkins, Caldwell, Idaho

". . . '47 Ford club coupe. I have chopped the top 4½ ins., slid the rear of the top forward nine ins., added a piece of flat stock to the deck to make it longer. Door posts have been slanted. The grille is '49 Mercury."
—Dick Conlin, Sioux City, Iowa

". . . It's a '48 Plymouth with a '48 Cad grille. The car was built in Oregon City, Ore., which is my home. The engine has been customized, too, and it runs a ¾ cam, high-compression head, dual manifold, twin carburetors."—G. A. Hammond, Donaldson AFB, Greenville, S. C.



Much has been written about the Mercer raceabout, an excellent automobile, but little has ben said about the rest of the Mercer line. MOTOR TREND reader Carl W. Bjelland, Chicago, Ill. sends along this unusual shot. He says, ". . . (this is) my '22 Series 5 Mercer sportabout. It would take $5000 to move my Mercer and I would have to be caught at a very weak moment."

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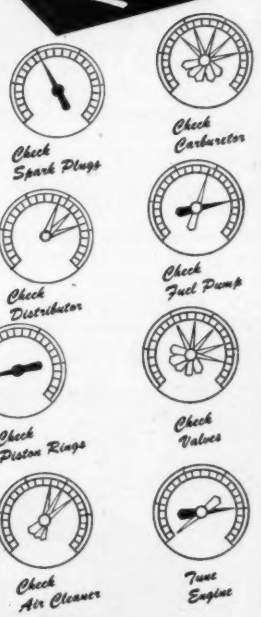

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SPOTLIGHT ON DETROIT - as we go to press . . .

BY HARRY CUSHING, DETROIT EDITOR

DETROIT, MICHIGAN—The battle of the "dream" cars has rolled into top gear here in the automotive capital. GM's highly experimental Le Sabre and XP-300 kicked it off. Although neither are practical production cars, both are pioneering numerous automotive developments of tomorrow.

Now comes Chrysler's fabulous sport coupe, the K-310. This is one of the special jobs described here in the October, 1951, issue. Unlike GM's creations, this beautiful car could readily be built under the American system of volume manufacturing. As a matter of fact, there is considerable speculation in Motor City auto circles that eventually the car *will be* placed on the market in limited numbers. One clue pointing this up is Chrysler's use of its regular chassis. Nevertheless, K. T. Keller, Chairman of the Board, reports no decision has been reached on the matter as yet.

The K-310 was styled by Chrysler engineers in this country, but built by Carrozzeria Ghia in Turin, Italy. It is characteristically European in design, with low sweeping lines, a flat hood, and wire wheels. It represents an American approach to the sports car, Chrysler says, and was built as a companion to the firm's potent new experimental engine which develops 310 bhp on ordinary premium gasoline.

This first car is equipped with the present Chrysler V-8 engine of 180 bhp, but it is easily adaptable to the new power plant. In this advanced engine, Chrysler uses the principle of the hemispherical combustion chamber to achieve peak bhp at 5200 rpm, without supercharging and without special fuels. It has an 8.1:1 compression ratio with 331 cu. ins. displacement. Four carburetors, larger valves, and streamlined manifolding contribute to the increased power. Other engineering features of the car include automatic transmission, electric window lifts, power steering and a new electric seat adjusting mechanism.

The K-310 itself is 59 ins. high on a 125½-in. wheelbase. Overall length is 220½ ins. Steering wheel is adjustable in the continental manner. Elevated direction lights and tail lights are mounted on the rear fender. A specially balanced fixture for lifting the spare tire from the trunk is incorporated in the body.

More Dream Cars Coming

In the year ahead you probably will see other cars of this type introduced by Detroit auto makers. Well-advised authorities in this area point to Ford as having two such jobs in the works. These are slated to highlight the company's 50th Anniversary celebration later on. Still to be heard from are the other three Chrysler Corporation divisions which also sent chassis to Europe for body work.

Several '52 Lines Announced

Two companies currently are premiering 1952 models on a coast-to-coast basis. They are Pontiac and Chrysler, and they show little styling changes and only moderate mechanical differences over last year's cars.

New Hydra-Matic Unveiled

First of the GM cars to bow, Pontiac is featuring an entirely new power train with a high compression engine, a dual range Hydra-Matic transmission and a low reduction axle. Stylewise there is little change over previous models. Exterior mouldings, modifications in the radiator grille and trunk handles are the chief appearance refinements. Mostly, they are incorporated into the new car to give it a 1952 look.

Pontiac's new Hydra-Matic is a major step forward for this automatic transmission. It now makes available two optional driving ranges. One range has four normal

(*Continued on page forty-six*)

CHRYSLER'S "K-310" was styled in Detroit, executed by Ghia in Turin, Italy; it's rumored that the car may go into limited production. An interesting thought: What would it have looked like if Ghia had styled it as well as built it?

Your Editor Says . . . LET'S TALK ABOUT POLICY

WITH THE ADVENT of a new magazine in the growing family of Trend, Inc., it becomes more important than ever for us to let you know where MOTOR TREND is headed. Many of you, particularly those of you who are sports car fans, are probably wondering why you should continue to read MOTOR TREND, if *Auto* will be covering sports cars, European cars and sports car activities in general.

MOTOR TREND will give you a sweeping picture of the *entire* automotive world—regardless of what the news is or where it happens. Our main purpose is twofold: to keep you posted on what's going on in this fascinating field of ours and, to show you how to get the most fun and value from your car.

As we grow in the coming months, we will deepen and expand our coverage of all phases of motoring activity, still maintaining a balance. More emphasis will be placed on exposé articles, technical articles on new production and engineering items, and how-to-do-it-yourself stories. We'll continue to report on the latest custom cars, sports car events, and stock cars.

Steady readers of MOTOR TREND know that we are constantly improving our "Motor Trials." This we will continue to do; effective with next issue it will be more apparent than ever. And now that *Auto* has joined the family, MOTOR TREND can supplement its coverage by testing family-type European cars, such as the Jaguar Mark VII, Hillman Minx, Austin A-40, etc. *Auto* will test the sports cars.

Custom car pictorial and editorial coverage will continue but there will be added emphasis on design and construction fundamentals to aid those of you who wish to customize your own cars. Articles about sports cars will concern those that have important meaning for the average American motorists. The Nash-Healey and Cunningham are examples of this class.

Something new—to start in an early issue of MOTOR TREND—will be articles on hunting and fishing based on the utility of, for example, a new station wagon, showing you what can be done with such a car. And we plan a series of travel features unlike anything that's been done before.

Naturally, we'll continue our present departments such as "Classic Comments," "Spotlight on Detroit," "Sporting Scene," "Trade Topics," and "Overseas Newsletter." Your energetic support of these departments guarantees their long life-expectancy. Of course, the slant of MOTOR TREND still depends on you. As an example, if we find that a majority of readers prefer classic cars to customs—or vice versa—we'll respect your wishes.

To old friends it may appear that the scope of coverage has changed considerably since the magazine first came to life. When we made our bow on the newsstands in September of '49, we promised that the new publication would cover the motoring world from old to new, from Detroit to Europe. We've kept that promise, but two years and two competition seasons have created an interest in European and sports cars that only an all-out *aficionado's* magazine can satisfy: hence, *Auto*. The new title will free MOTOR TREND to expand its coverage of that which is most valuable and interesting for *anyone* who owns an automobile.

—Walter A. Woron

Reader Reflections

(Continued from page seven)

brochure entitled "Health Aspects of Fiberglas Materials."

Undoubtedly it will be reassuring to your readers to know that they need have no fear of the possibility of lung damage as the result of working with Fiberglas plastic parts.

Edward C. Ames
Owens-Corning Fiberglas Corp.
Toledo 1, Ohio.

—The report referred to is available from Mr. Ames' office.

SLIDERULE SLIP

Gentlemen:

As a rule, I read Motor Trend before the ink is dry: Perhaps I've been too hasty with the January '52 issue with reference to the article on page 24 by Isamu Uchiyama describing the 10 candle-power, vest pocket edition of what we Americans are to consider as resembling an Indianapolis job.

In your write-ups, you claim this miniature Maserati has a displacement of 45.58 cu. in. derived from a four-cyl. engine with a bore-stroke ratio of 1.52 x 1.65 ins.

Does not our good ally, from the land of the rising sun, have in mind 2.52 x 2.65 ins. instead of 1.52 x 1.65 ins. In either case, this engine would be out of line for Formula III competition races. Please set me straight in the next issue.

M. H. Goodnough
Yucca Valley, Calif.

—The slip was on OUR slipstick. Bore and stroke quoted by the factory was 60 x 66mm, which converts to 2.36 x 2.6 ins. Although the Datsun racers were not intended to qualify for Formula III, they do qualify for FIA Class H (racing category). This class covers vehicles from 500 to 750 cc. Metric displacement of the Datsun racers is 747 cc.

WILLS SAINTE CLAIRE

Gentlemen:

I read your magazine every month and each time it gets better. I'm especially interested in the "Classic Comments" section which always is interesting. I hope that in the near future you will have an article on the Wills Sainte Claire made in Marysville, Mich. from '20 to about '27. I would be interested in receiving letters from old Wills fans who have any information on this car. Keep up the good work.

M. Arnold
Redondo Beach, Calif.

—We'd like to get source material on the Wills, too. An overhead camshaft V-8 engine is what we're almost ready for today—Wills had it in the Twenties!

HIGH OUTPUT

Gentlemen:

In regard to the article (Dec. '51 MT) on "Why the Efficiency of Firepower" I saw a diagram of a '04 Belgian Pipe Co. engine; is that, or what was the first engine built that had a hemispherical combustion chamber?

From my experience with this type engine design I believe it is more efficient than any built. The Triumph motorcycle, which is 40 cu. in., and uses that type head, is far superior to any side valve machine of comparable size.

Do you think that in the future all automobile manufacturers will adopt that type combustion chamber?

Francis Michiels
Monroe, La.

—To say that Pipe was the first to experiment with this idea would be to invite controversy, but it's the first we know of. The American Stoddard-Dayton car used a similar layout at about the same period. The French engineer Henri was, it seems, the first man to really understand and exploit the hemispherical combustion chamber. He designed the more or less all-conquering Ballot and Peugeot engines of the Second Decade; his engines set the standard which all subsequently successful racing machines have followed. Henri died in poverty in France last year. We'd be glad to hear from anyone having information on early application of the hemispherical combustion chamber. The essentially superior performance of this, as opposed to the side-valve, layout is implicit in the AMA Class C motorcycle racing regulations: 45 cu. in. side-valve machines are allowed to compete against 30.5 cu. in. ohv jobs!

STEAM AT INDIANAPOLIS

Gentlemen:

As a constant reader of your very interesting magazine, and a great admirer of your very enlightening articles, I feel obligated to write a line or two regarding your article on the Doble steamers.

Also the comments of Fletcher Hereford, and John B. Price, in "Reader Reflections" in the December issue, are of especial interest.

As the designer and builder of the First and Only steam car ever entered in the Indianapolis

(Continued on next page)

Reader Reflections

(Continued from preceding page)

"500" in 1948, I would like to say to Mr. Price that steam cars have never been and are not now barred from major auto races here in the U.S.A. The only stipulations are that the rules of the technical committee be adhered to to the letter.

For example in my entry in '48 at the speedway, I would likely have been barred from competition due to the ruling requiring all cars to be fitted with some sort of device such as a clutch, to disconnect the powerplant from the wheels. Which of course I did not have, since I followed rather conventional design of steamers, by having the engine coupled directly to the front wheels. There is of course no need for a clutch in a steamer since no transmission is needed for reverse.

There is not the slightest doubt in any automotive engineer's mind that with modern design, and modern materials, a steam, (or vapor) driven car can be built that will far outperform anything that can possibly be built using the principles of internal combustion of fuels. Those who won't admit this fact, either are not aware of the principles of steam power, and have never ridden in a steam car, or through ignorance and conceit are ready to ridicule anything they know nothing about. I ran into this deplorable situation among men in the "saddle" of some of our largest automobile manufacturers.

As an engine designer of some repute, and having been associated with engine design with such concerns as White Motors, Hercules Motors, Lincoln-Mercury engine design, and also the erstwhile Higgins-Tucker Motor Co. and being the inventor of a simple combustion chamber for existing engines that will not knock or ping at even 11 to 1 compression, on standard pump fuels, I feel qualified to say that there has been, and will not be in the foreseeable future any great improvement in the internal combustion engine. Personally, I think they all "stink." The BASIC principles are all wet. In other words, they do everything an engine shouldn't do. For example, they make noise, so we have to muffle them, no torque at low speeds, so we have to shift gears. They won't start by themselves, so we have to "starter 'em." They inhale dirty air into bearing and cylinder surfaces that wears them out, so we have to "air and oil clean 'em." And last but not least, their TORQUE power to weight ratio is pitiful. Even the racing engines.

That is what interested me in the possibilities of steam, and what prompted me to pit a steam car against the VERY best internal combustion engines at the world's greatest sport event, the Indianapolis "500." Unfortunately, the car never got there, due to factors beyond my control. But road tests proved the terrific torque of steam. Wheel spin under power, or "breaking loose" was had at 100 mph

The only way steam power will ever get a break, is for someone to build a good steam race car, and whip the pants off the present bang bang putt-putt fuel wasters, and with it the ensuing acclaim and publicity this would involve. It can be done too, but it takes money.

In conclusion, the trucking industry badly needs steam power for two reasons. First, with the growing numbers of trucks on the highways, becoming a major nuisance to the average car owner who pays the major portion of road construction costs, the trucker needs near equal performance of the average passenger car as to hill climbing speed, acceleration off a stop light in traffic, and the power braking ability that only steam power can give, to descend hills. Second, I know that a steam powered truck would show an OVERALL economy much greater than the present Diesel rig, and at about half the first cost.

Last, but not least, it's time our armed forces looked to the great advantages of steam power for their vehicles. Such as trucks and tanks. They are ideal performers in sub-zero temperatures. Start quick, and are practically silent. Both important advantages.

No, I don't think steam vehicles will ever get a break. About one out of every ten people in the U.S.A. either directly or indirectly gains his livelihood through some phase of the automotive industry. How could a dealership exist without service profits? A good steamer with about 25 moving parts, and able to run possibly 100,000 miles without repairs, would starve the garageman and dealer to death. Great reductions in manufacture of gears, spark plugs, clutches, ignition units, ethyl gasoline, and even gasoline itself, would happen if the steam car got popular, and many more items too numerous to mention. And the buyer could get a good steamer for about 1200 dollars, due to simplicity of construction. So maybe the world is not yet ready for steam vehicles that run fine on furnace oil.

Hoping for continued success of your swell magazine, and lets have some more on steam cars.

Yours very truly,
Lawrence D. Suttle, M.E.
Wichita, Kans.

CADILLAC MOTOR TRIAL

Gentlemen:

I am the proud owner of a '51 62 Cadillac coupe and read with avid interest your current Motor Trial of a '51 Cadillac. I heartily concur with every good feature mentioned about the Cadillac in your article and also concur with some of your adverse

comments about the Cadillac, e.g., the very bad reflection in the windshield and the "not up to Cadillac standard brakes." However, your criticism of the Cad's roadability is not borne out by the facts. I take you to task on your statement that the Cadillac is a dangerous car to drive above 70 mph.

In discussion on this point I would like to offer in evidence Floyd Clymer's book on the [first] Mexican stock car race during which on the flatout run no car except the Lincoln driven by Johnny Mantz and equipped with racing tires, was even close to the leading Cadillacs, which averaged over 95 mph for over 500 miles in that race. If that speaks of lack of roadability then please offer me some more evidence.

I have driven every American manufactured automobile and I offer my own testimony that with the exception of a Hudson and Buick Roadmaster there is no car that is as roadable as the Cadillac.

I think it was rather unfair to run that Cadillac you tested in your acceleration time on six cylinders (that is the only possible excuse I can figure for the 17 seconds it took you to get to 60 mph). I had a '49 Cad prior to my present car which would reach 70 (on its speedometer, but there is little error at that indication) in less than 17 secs. and 60 in less than 13 secs. This present Cad takes 18 secs. to 70 and between 13.5 and 14.5 to 60. I might offer, if you would take the opportunity, to attend a few of these drag strip time trials. You'd see Caddies staying nose-to-nose with Oldsmobiles and beating Lincolns. Your time trials would indicate otherwise. I also might offer in evidence of a faster accelerating car than you indicate, the time trials by Tom McCahill of MI who obtained 60 mph in Hydra-Matic-equipped Cad in the time of 11.9.

My next point is your dynamometer test. I am by no means an automotive engineer, but please, in another article could you cover justification for the following:

Cadillac (rated hp 160)	Dyno hp 92	Torque 312
Lincoln (rated hp 152)	Dyno hp 95	Torque 265
Olds (rated hp 135)	Dyno hp 92.5	Torque 245

It hardly seems consistent that an Olds with practically the same fan, water pump, generator, etc., and equipped with Hydra-Matic will develop more road hp than a car starting with 25 more horses to begin with. Also inconsistent is the relative acceleration for the three cars when the car with the highest hp/lb. ratio achieves slowest acceleration time. I can say truthfully that some Olds 88s have forged slightly ahead in dragging with the Cad I now have but I can say just as truthfully that no stock Lincoln has ever got a nose in front of it.

Major Elden D. Jones
Riverside, Calif.

—Sure, we held our test Caddie wide open across El Mirage repeatedly. We weren't any happier with its behavior at that speed on the slightly irregular lake bed than at 80 on deserted desert roads. This was the verdict of the four members of our test team whose business it is to shake down every new car we can obtain. So you can barrel along at 95 mph all day. In our test car that would have meant constant correction for wander. Why should you have to correct on the straightaway?

If you'll compute the time it would take you to reach an ACTUAL 60 mph on your own Caddie, using our speedometer correction figure, you'll find that your figure and ours match pretty closely. Our car had just a few thousand miles on the odometer. Maybe yours is looser—better run in—and will pick up a few tenths of a second. Uncle Tom's 60-mph-in-11.9-sec. Cadillac is a lot better than several Cads we've driven.

The relationship of road hp to flywheel hp is discussed in the engineering award story in this issue and should answer your question about dyno ratings. Also, please compare the Olds Super 88's acceleration figures (MOTOR TREND, Jan. '52) with those of the Cadillac.

SUGGESTION BOX

Gentlemen:

. . . May I offer a suggestion? Why not list the Trend Trials numbers of makes previously tested, along with the data on the car on trial? It would save a lot of confusion and searching for back numbers. . . . Other than that one thing, the report (Motor Trials) is very useful and most convenient.

R. J. Mackey
Plattsburg, N. J.

—Thanks for the sound suggestion, Mr. Mackey. In the March issue, we will run a complete list of TT numbers for all cars tested by MOTOR TREND, by price classes.

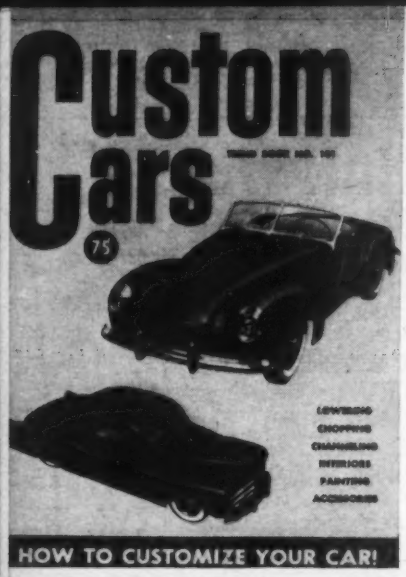
Gentlemen:

Most of the time I like your magazine, but I do have one complaint to register. Why is it that you never cover stock-car and hot-rod events? Sports cars and new European models are fine, but they don't mean as much to the average car-owner as the changes and developments that are going on right in your own back yard.

Don't get me wrong, now. I'm not a roadster owner, just another citizen in a Chevrolet. But if some kid, working in his back yard, comes up with a gadget that will give me more speed and more gasoline economy, I want to hear about it.

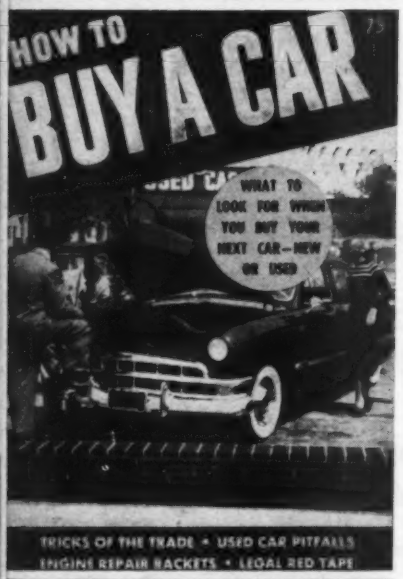
Dale Kerrigan,
Detroit, Michigan

—Keep reading, reader Kerrigan—it's all coming your way.

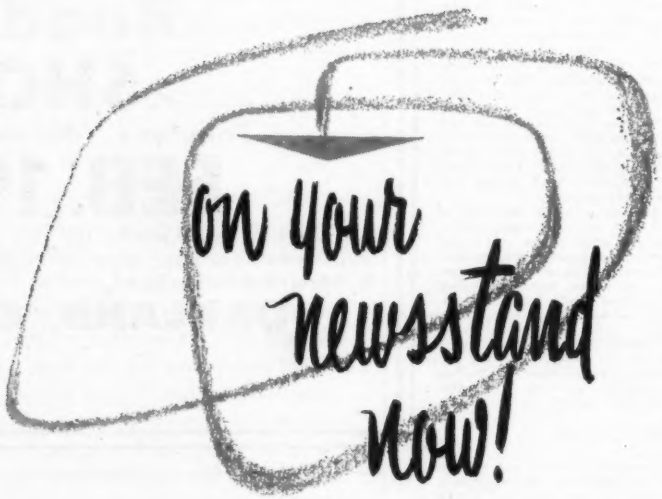


collector's items —

From MOTOR TREND'S huge file on customizing come valuable facts, hundreds of detailed diagrams and photographs—to bring you America's only complete book on the beautiful and bizarre custom creations of modern motoring—to show you how to restyle your car . . .



At last! A book that covers every phase of buying a car—new or used. How to buy it, how to defend your legal rights, how to keep it rolling. Let the experts lead you through the fine-print clauses, tell you about "bushing" and selling used cars for new, explain depreciation. HOW TO BUY A CAR: your guide to a really profitable investment . . .



America's most unique sport—on display in the photo-packed pages of this great book by the Editors of HOT ROD MAGAZINE. "How to do it" features, cutaway drawings, and engine conversion articles reveal the building secrets of these sleek, spectacular cars. Hot rodding—past, present, and future: in HOT RODS!

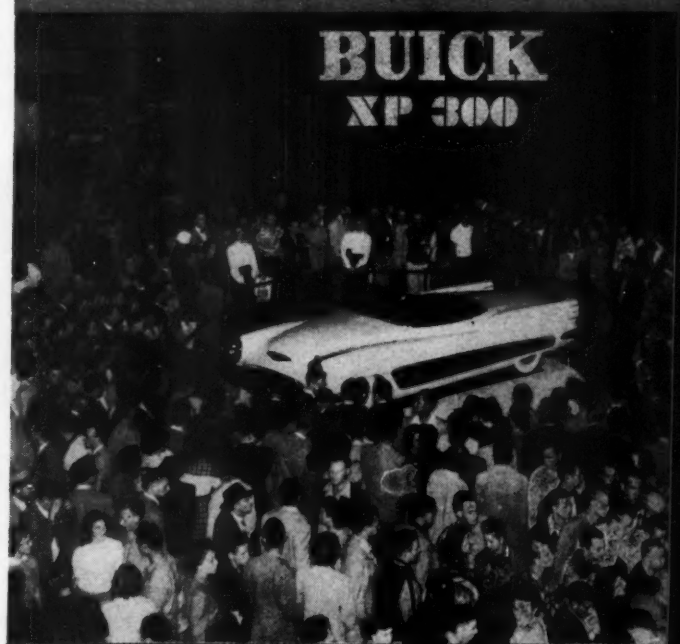
If your dealer cannot supply you, send 75c for each copy desired to Trend Books, 1015 S. La Cienega Boulevard, Los Angeles 35, California

AMONG THE stars at Motorama was ex-Duesenberg exponent Gary Cooper; among the celebrities, XP-300 designer C. A. Chayne

Cars were the Stars at MOTORAMA

RECORD THRONGS JAM PAN-PACIFIC AUDITORIUM TO SEE AMERICA'S GREATEST DISPLAY OF SPEED AND POWER

Photos by Eric Rickman-Felix Zelenka



MORE ON FOLLOWING THREE PAGES →

FAMOUS PEOPLE . . .

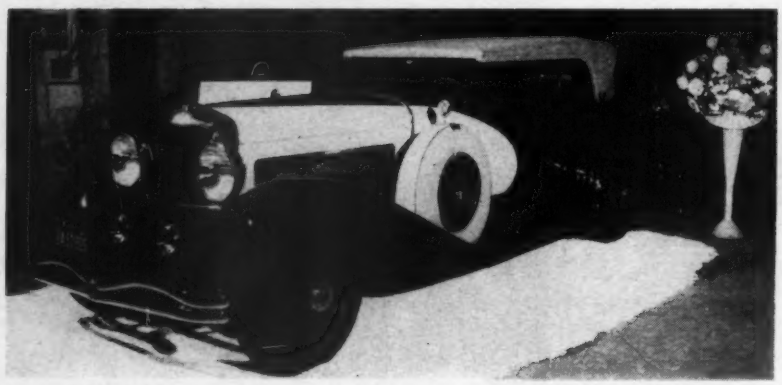
PAT KNOWLES EXPLAINS his Rolls to an admirer. The flame-red convertible coupe was exhibited in the Sports Car Club of America booth, along with an MG, a Crosley and a Jaguar SS

KEENAN WYNN TELLS the story of the "Beast" to his sons. "Beast" is fastest-accelerating machine in the world, attains amazing speed of 129 mph from standing start in one-fourth mile

GLAMOUR . . .

TELEVISION'S KEN GRAUE interviews Moulton Taylor, inventor-builder of the novel Aerocar

MISS EQUA-FLOW effectively stopped the flow of male traffic by her station. Nobody objected

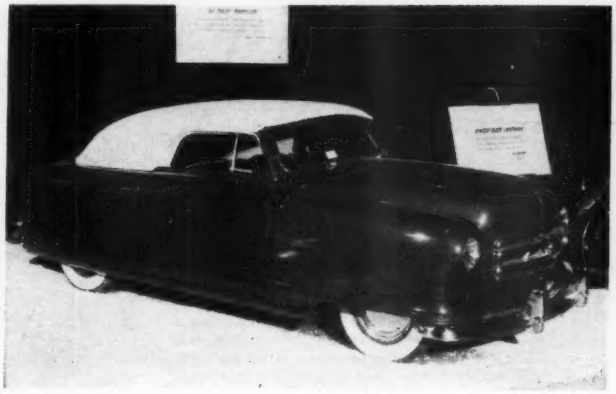


DUESENBERG LA GRANDE phaeton, formerly property of Howard Hawks, furnished link with the lush salons of an era half forgotten

THIS WAS a DeMille production, with glittering lights and thousands of people swarming across the stage and a fabulous collection of stars assembled from the far corners of the motor world. Here in the City of Stars the show of the year was Motorama, and the stars were cars.

In the gleaming array were the proud ambassadors of motordom: the breathtaking XP-300 from Detroit; the sleek Jaguars and graceful Rileys, Sunbeam-Talbots, MGs, Minxes and a host of others out of England; France's Simca; custom cars from California's finest builders; and a splendid legion of the uniquely-American hot rods. In supplement, but not subordinate in any way, the speedboat champions and the best of midget racing planes and all of cycling's greatest bikes evoked the "ohs and ahs" of the pilgrims. A superlative spectacle in the city of superlatives.

. . JEWELY CUSTOMS



GLAMORIZED NASH Rambler sports Chavez top, has been planed and decked and dechromed by California shop to achieve slick, unique look

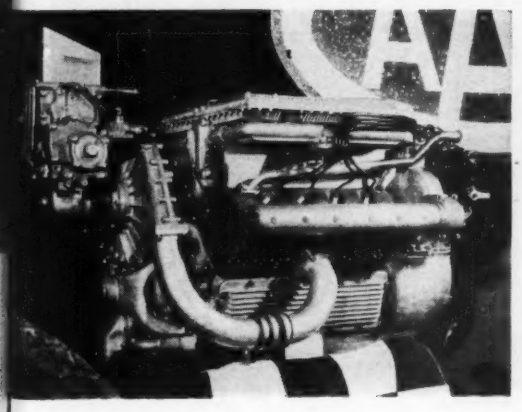
THE BROTHERS BARRIS, Sam and George respectively, pose for a rare picture at their booth of customized automobiles

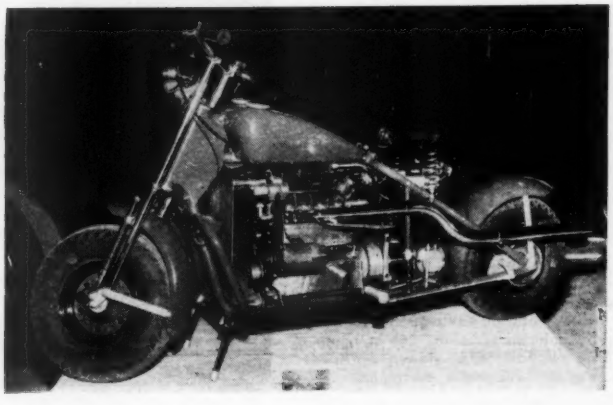
FIBERGLAS SPORT custom decorated MOTOR TREND's end of the Trend, Inc., exhibit. Car was designed by Bill Tritt for Major Kenneth Brooks

BEAUTIFUL ENGINES . . .

NOVI SPECIAL engine was big attraction at AAA booth, is blown 183-cu.-in. V8, one of most powerful engines ever made in America

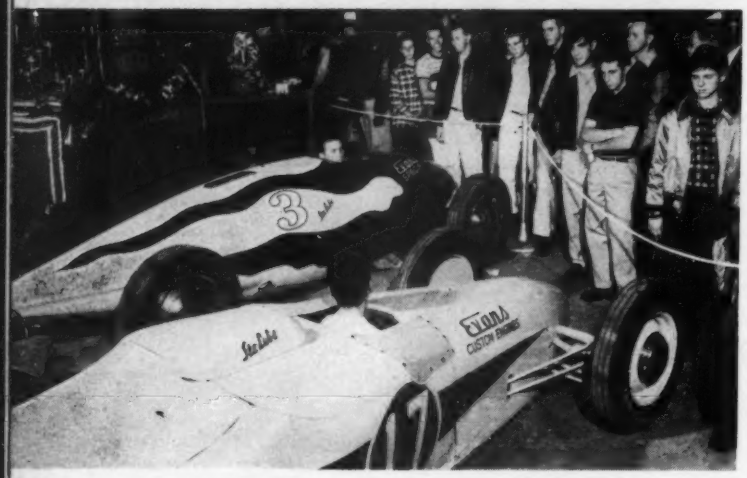
FRANTIC FOUR is handiwork of Mustang motorcycle engineer, Howard Forrest. Water-cooled, overhead cam engine is handmade; has 1¾-in. bore, 2-in. stroke; develops 12 bhp at 5500 rpm





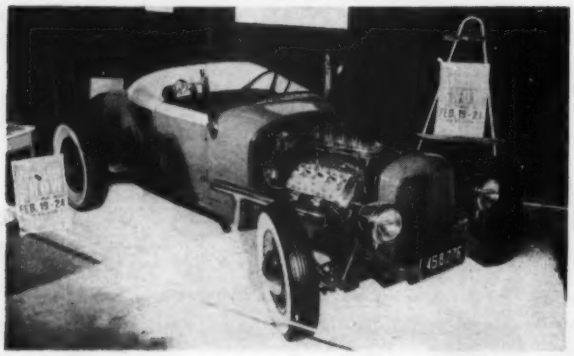
But Motorama was not just a showcase of glitter and grandeur; there was an underlying significance for all who would see. Here was a binding together of the varied, ofttimes dissident, components of the motor world—a camaraderie which re-affirmed conviction that all men can live and work together if they but name a common cause.

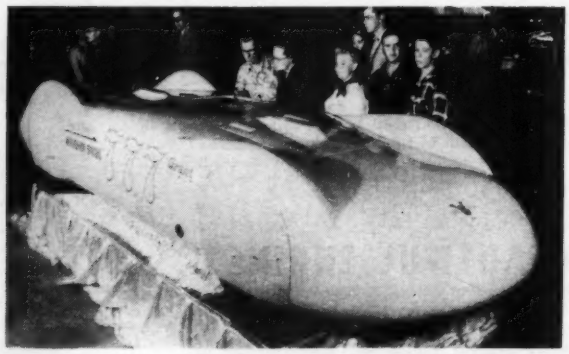
Here is what we heard: Commissioner Peterson of the California State Highway Patrol, stalwart champion of better traffic education, saying . . . "It is surprising and gratifying to find the many groups of the motor movement working so effectively together to demonstrate to the general public that safety, beauty and efficiency . . . and individualism are all vital attributes of the modern automobile. Civic authority will always welcome such dramatic presentation of the good in any con-



YOUTH WORSHIPS at the shrine of speed. "3" is belly-tank lakester, turned 183 mph. "17" is officially classed as "modified roadster," tripped the electronic timer at Bonneville at 178 mph

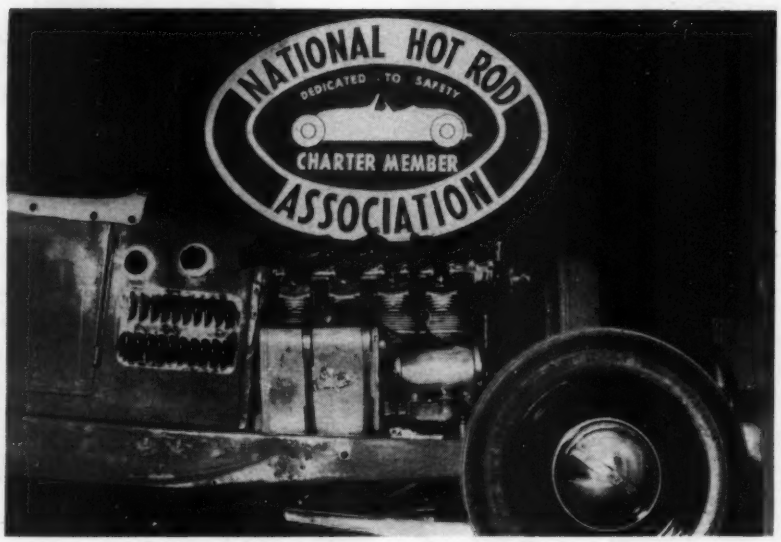
"WORLD'S FASTEST HOT ROD" is the proud title of the Kenz-Clymer streamliner. Two full-race V-8 engines, one fore, one aft of the cockpit, supply power. Top speed—230 plus mph!





STREET ROADSTER is the accepted name for this '27 T body, Mercury engine, '32 Ford grille combo. Owner is Sal Macchia of Oakland

. . . and HOT RODS



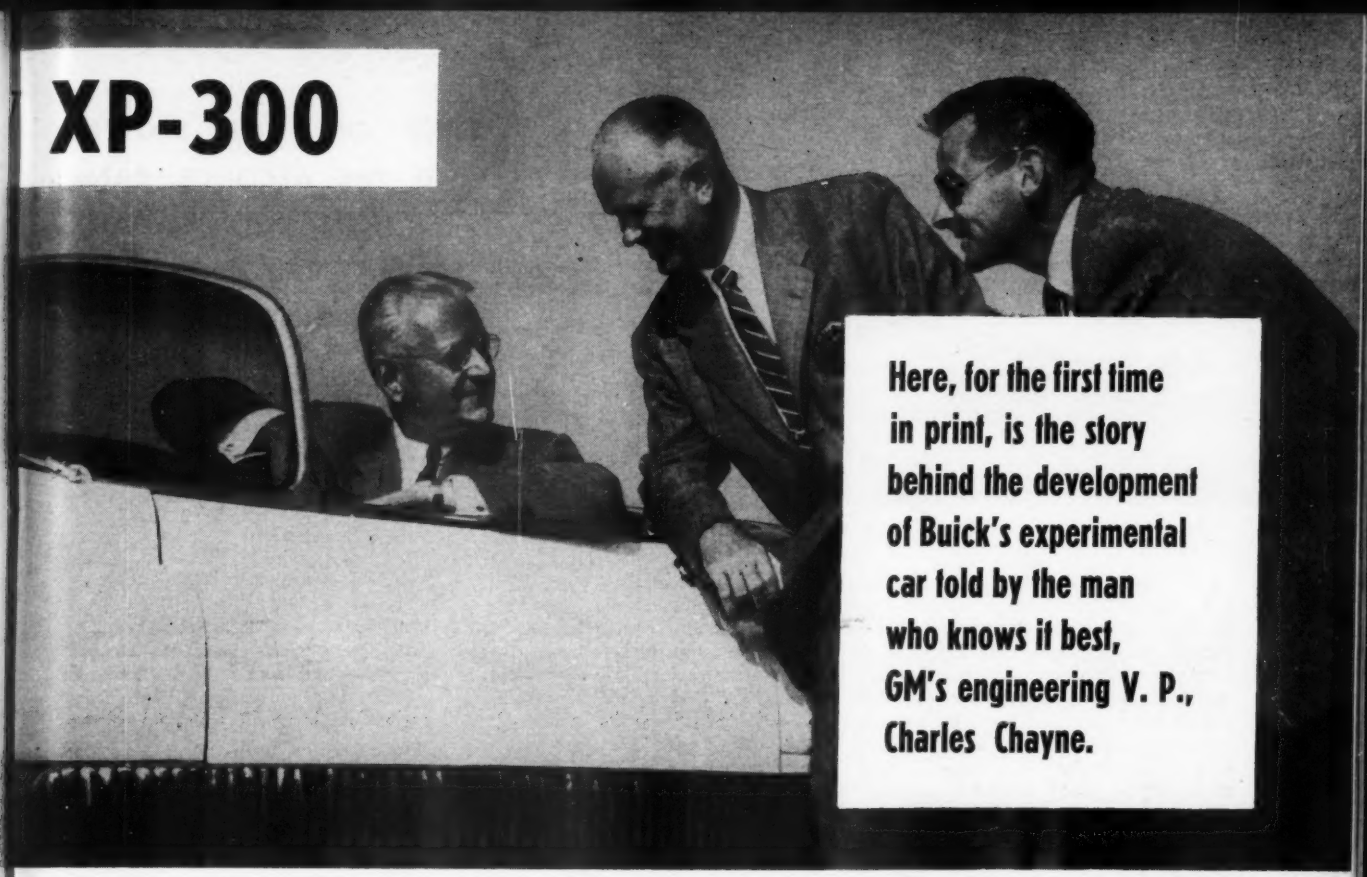
SPEED, POWER, AND SAFETY—all three must go together. Motorama and the National Hot Rod Association recognize this fact. In a special booth, NHRA officials answered questions, explained organization's aims. Car in booth is special drag job, powered by six-cylinder Ranger aircraft engine, will enter competition soon

structive movement!"

And this is what we saw: crowds of enthusiastic patrons besieging the movie theater in the auditorium where Bonneville championship hot rod trials and sports car road racing films continued without cessation throughout the show period; throngs of elders jammed against the Board of Education exhibit which demonstrated the new traffic safety education program; and never-ending crowds pushed their collective way to the booths of NHRA and Motorama Foundation to learn in detail what these programs for youth entail. And all the while the California Highway Patrol and Los Angeles Police Department, along with associations representing hot rods, sports cars, motorcycles, speedboats and racing planes were doing yeoman duty in the service of automotive progress and motor sports.

And finally, this is what we feel, now that Motorama has been recorded in history: happy, gratified . . . tired!

XP-300



Here, for the first time in print, is the story behind the development of Buick's experimental car told by the man who knows it best, GM's engineering V. P., Charles Chayne.

CHARLES CHAYNE beams from XP's comfortable cockpit, discusses car's performance with GM's sales chief Ivan Wiles, and Griff Borgeson

WHEN THE editors of MOTOR TREND asked me to write a story on Buick's XP-300 I accepted the invitation with enthusiasm because the reasons for building both this car and General Motors Styling Section's Le Sabre have been misunderstood by so many people. The fact that these cars are not prototypes of soon-to-be-announced models should be immediately obvious to anyone seeing the cars or reading their specifications for the first time.

Everyone must realize, I am sure, that the engineering departments of car manufacturers frequently build cars which, while they look like the cars that you and I are driving every day, have experimental features concealed beneath their conventional exteriors. Their experiments may be quite exploratory in their nature and may not be tagged with the date of some specific future model—but the very fact that these cars are quite normal in appearance indicates that the engineers are protecting their companies' future by studying what can be done either within the "package size" or within the limitations of present production machinery. This, we must admit, is very sound economics, not only for their companies but also for us who buy and drive the cars they design.

With the tremendous investment in factories, machines and tools that is required to give you cars at the prices you are paying, it should be easily understood that extensive changes are pretty costly matters and since these costs have to be recovered in the prices of the cars, we have to pretty clearly define the paths for our engineers to follow. Any engineer who is worth his salt chafes under such limitations and always wants to reach out and try something a bit different.

It has always been this writer's opinion that every engineering department should from time to time be given the opportunity to do something far off the beaten path. After all, we take vacations every year supposedly to refresh ourselves physically—why not take a breath or two of fresh air mentally and see if that sort of exercise will produce interesting results.

In 1938 the Buick Division and the General Motors Styling Section collaborated on an experimental car which we called the "Y" job. In this car we used a Buick Super chassis with only a few modifications to accommodate the special styling. The car proved to be very useful and was responsible for many features considered commonplace in today's cars.

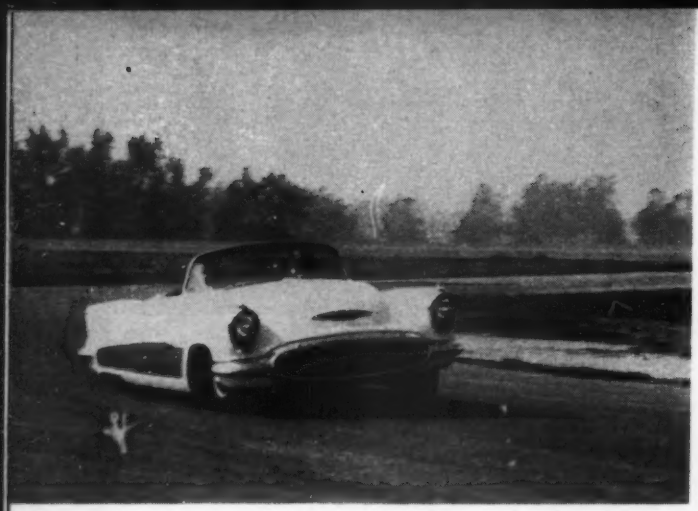
In fact, this car was so far ahead of its time, style-wise, that only a few years ago a reporter new to the Detroit area saw it for the first time and wrote a news story on this new, as yet unannounced Buick that he had seen on the streets of Detroit. Of course the story was caught and stopped, but after we got over the initial amusement of the incident it caused Mr. Harley Earl, GM vice president of styling, and the writer, who was then chief engineer of Buick, to discuss very seriously what we had accomplished with this car and whether it was about ready for an honorable retirement.

We decided that it was time to build a successor to the "Y" job and to see if we could better our mark of "good after ten years" by doing one that would be still fresh and new after fifteen years.

We weren't very far before it was clear to us that one car could not possibly contain the things we wanted to try, so we worked out a program for two cars. We discussed the proposed cars with Mr. H. H. Curtice, executive vice president

(Continued on page 47)

ENGINE DISCUSSION AND CUTAWAY DRAWING ON NEXT TWO PAGES



TAKE OFF THE BLOWER AND THE ALCOHOL TANK . . . THEN LOOK AGAIN. THIS MAY BE TOMORROW'S BUICK ENGINE

BY GRIFF BORGESON

XP WAS doing between 40 and 50 mph when this shot was made, which clearly shows car's tendency to heel. Although very large cross-section tires are used, extreme wide-base wheel rims minimize tire squeal

A CAR ENGINE with 335 bhp? Not for you and me. Buick's XP-300 can produce that amount of urge, but that's only for testing purposes. In an exclusive interview, Dick Cook, chief engineer for the Buick division, told me that the output of this test engine has been boosted almost beyond the limits of its capabilities so that failures (and it is expected that there will be some) can be quickly detected and corrected. But even without the supercharger and the ultra-high compression ratio which demands alcohol fuel, the XP-300 is something very special.

You and I know that one of the most remarkable developments of the post war era is the mass rediscovery of the automobile. I don't know about you, but I didn't expect Detroit to catch the fever. Then a cross-section of the XP-300 engine hit my desk and the evidence was there, screaming. Detroit finally had it so bad that the world stronghold of ultimately-practical production-line automobilism couldn't resist the opportunity to show that it could match and surpass the most all-out creations of European, high-performance production engines.

But the practical Yankee touch is everywhere visible in the XP's power plant. Engines of fabulous output have been built countless times before, but the XP engine, for all its radically advanced ideas, has potential production possibilities written all over it. Its shattering power has been achieved by means which are definitely *not* beyond production-line techniques; the philosophy upon which its development was based was one of economy in all directions: space, weight, fuel consumption, even manufacture. This is a head-in-the-clouds, feet-on-firm-ground sortie into the future. It's almost a subject for science fiction.

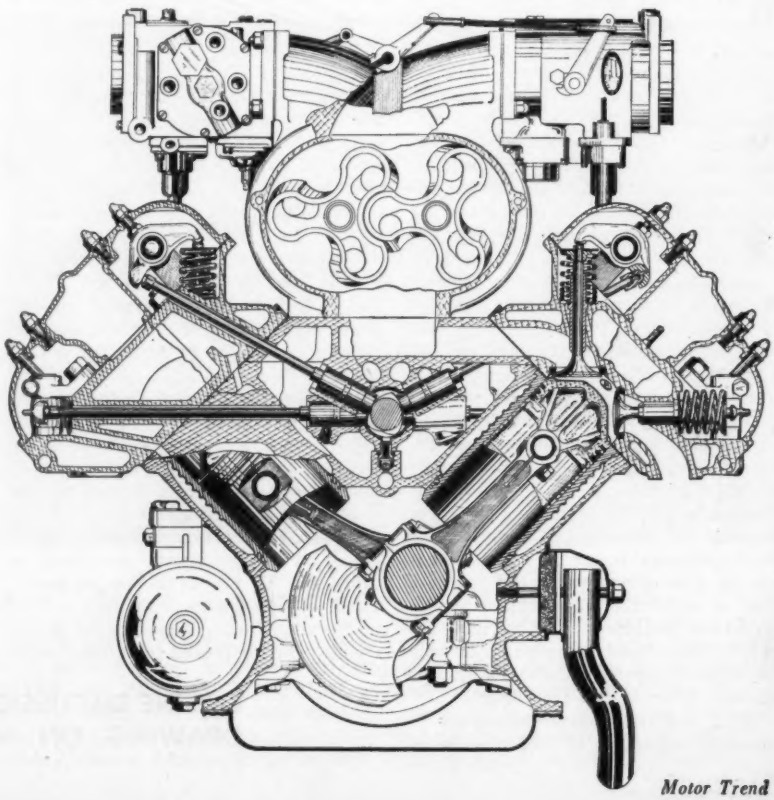
When I had the valuable opportunity to discuss the XP with Charles Chayne and Dick Cook, I made it clear that MOTOR TREND readers constituted an intelligent nucleus that can and does give real support to progressive engineering. With you in mind, we discussed these things:

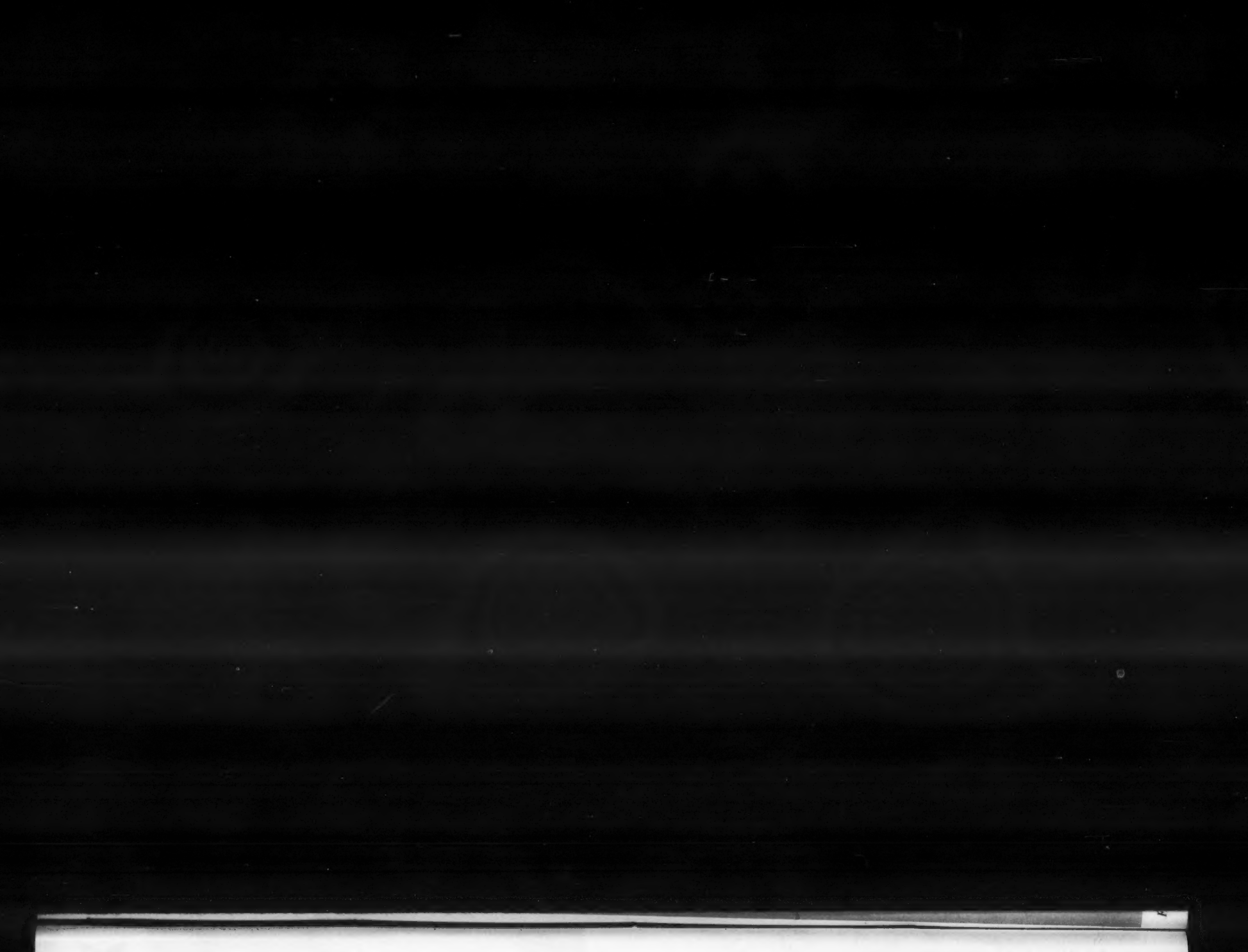
The XP's crankcase-block casting is a fascinating subject for study, has much in common with highly-stressed, high-output racing engines. While the modern, line-produced V-8 crankcase terminates at a point on or near the center of the main bearings, the XP case is much deeper, main bearing support and crankcase stiffness are much greater. The wide, but ultra-shallow oil pan is a notable feature.

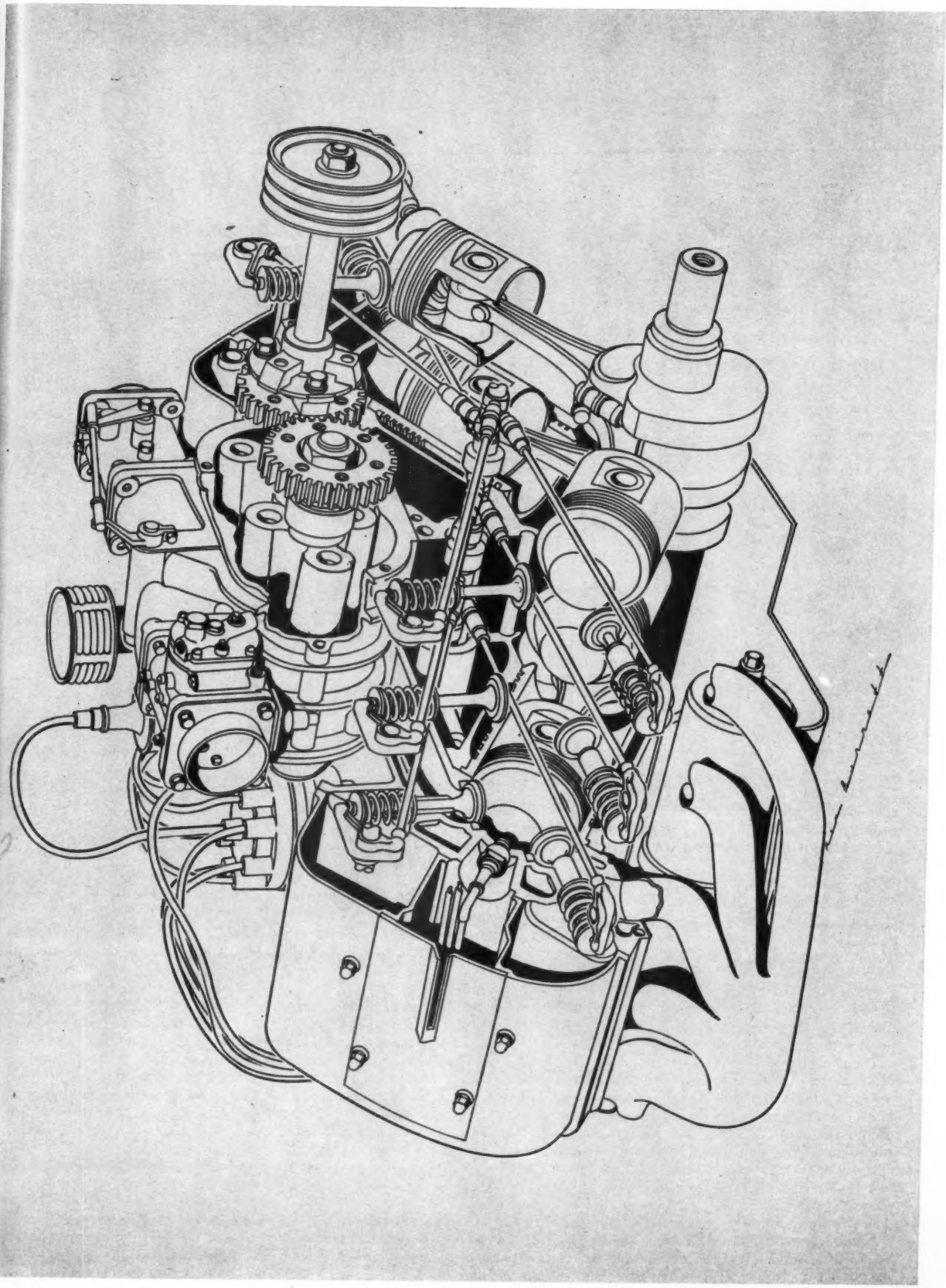
You'll notice that the cylinder barrels themselves are cast iron liners which are inserted into the cast-aluminum blocks. The advantages of this arrangement are many; a principal one is easy, cheap replacement of cylinders. Perhaps the most important advantage is that guesswork is eliminated as far as water-jacketing of the cylinders is concerned. The thickness of cylinder and block walls can be quickly ascertained and perfectly controlled—a great improvement over the conventionally-cast block.

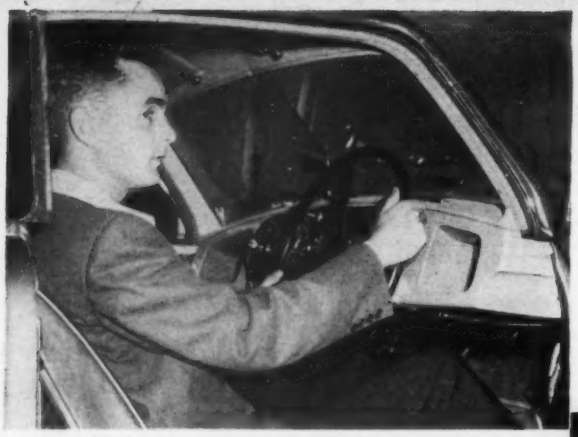
The XP-300 engine uses domed pistons possessing excellent internal bracing. But only three piston rings are used and many motorists have learned that pistons with so few rings tend to pass oil and foul spark plugs. Three rings were used in the XP design, first, for compactness of the piston structure and reduced friction;

(*Continued on page fifty-two*)









my choice . . .

DB2

By Phil Hill
Photos by Tom Medley

So the engine is small and the rear seat is for the dwarfs—the Aston Martin is still a lot of car

$5200? Why, I didn't pay that much for my Cadillac! And this," indicating the Aston Martin, "is such a . . . well, just such a tiny thing."

Needless to say the lady did not buy the Aston. When she saw it through the showroom window she thought it was a cute little toy and assumed, quite naturally, that it would carry a toy price tag. Nothing I could say would convince her that automobiles aren't always sold by the pound—that superb performance and quality workmanship are an expensive combination, whether they come in little or big packages.

To be quite truthful, I considered the price a little stiff at first. Jaguar sells its XK-120 for under $4000; the MG, though not in the same performance class, costs less than $2000. The Aston's engine is about halfway between the two in size, the body is of Jag proportions. Why should it deliver for more than $5000?

It wasn't long before I had my answer. Just two crosstown jaunts, one of them out Sunset boulevard to the ocean and back, convinced me that the DB2 was something out of the ordinary. The cornering, for example, was fantastic. It's the best cornering car I've had, and I've driven both standard and modified XK-120s in road races. Actually, the Aston corners similarly to the Alfa-Romeo I owned, except that it doesn't have the peculiar over-steering tendencies that Alfa had with its swinging axle.

Before I actually bought the car, I checked it for quality. The furnishings are Rolls-Royce-like in character. All the chrome has been applied over solid brass, with the result that it has the same rich luster as you see on Rolls and Bentleys. The instrument panel is flawlessly executed. Down under, the frame is made of small, square-section hollow-steel tubing. It's a double-rail affair right from the front suspension mounting all the way back. The overall styling of the body is obviously of the modern Italian school, and the body panels are shaped and fitted with utmost precision.

There have been comments made about the Aston's being very skittish and supersensitive and that oversteering at high speeds is a dangerous fault. In my experience, that just isn't so. My car, of course, is only running the stock engine with the 6.5:1 compression ratio, but I've taken it up to speed and never had any trouble. On a long trip to Reno, we averaged 70 mph, running one hour at 84 and another at 82. I have never driven a car that tracks as straight and as comfortably as the Aston. Even on roads where there is an extreme change of camber (high crown to low gutter) the car is absolutely unaffected.

It's almost eerie to drive the Aston at speed because the body has so little wind resistance. Few people realize how much of the fatigue of a long trip is contributed by the constant thunder-

SLEEK ASTON looks like a hippo in this photo, but car slips through cross-winds, head-winds with almost complete silence and lack of friction

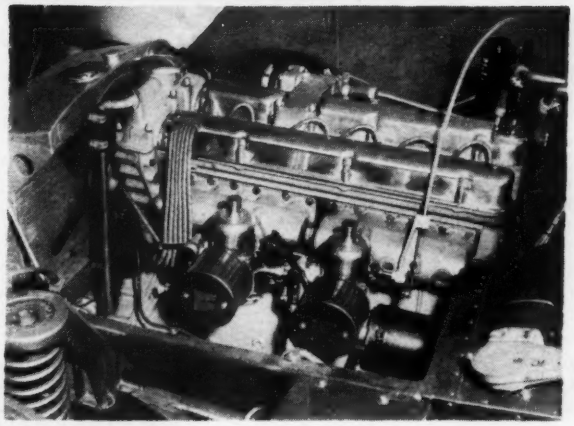
ing and buffeting of the wind—a serious fault with practically all convertibles and modern American cars. On that 490-mile trip to Reno, we put a lot of miles into every hour because that smooth, compact body slipped through headwinds and crosswinds effortlessly and silently.

Perhaps the Aston is at its poorest in the city, where its relatively small (2.6 liter, 158 cu. in.) engine has to move the 2500-lb. car from a standing start so often. Yet that Studebaker Champion-size engine will reach 100 mph in just a little over half a minute; 60 in half that time. To get this acceleration it is necessary to go through all four gears in the David Brown gearbox. Cadillac owners might scream at the thought of four shifts at every stop sign, but it is really a pleasure to handle the fast, sensitive gears on the Aston. First, or low, gear is not as low as you might think—at 6000 rpm, speed in that gear is in the early 40s.

Of course, right after I bought the car I had to take it out on a mountain highway to test it. I tackled the Angeles Crest road out of Los Angeles. You can get yourself into very embarrass-

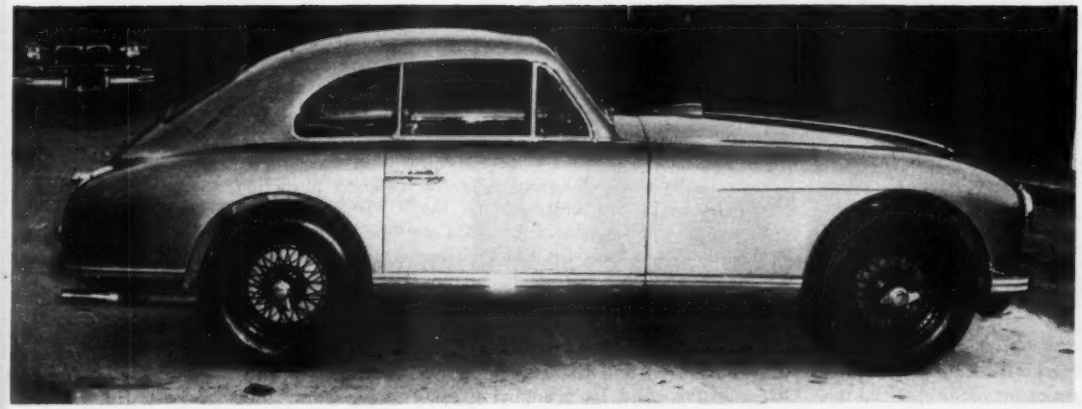
(*Continued on page fifty-eight*)

FIVE SIGNAL lights on dash indicate (left to right) trafficator in use, reserve gas tank in use, switch on but engine not running, starting carburetor in use, high headlight beam on. Panel is a precision masterpiece



DUAL OVERHEAD cam, inclined-valve engine is Aston Martin's glory. Although displacement is small, average revs high, economy is outstanding. Performance was proved by 1-2-3 win at Le Mans road race

ACCESSIBILITY UNLIMITED is a requirement of the well-designed machine for the enthusiast. Trouble light is operated by switch on dashboard



ASTON MARTIN has always been an enthusiast's machine, hence the surprising—for England—adoption of Italian aerodynamic body design

Hollywood's Chop Jobs

THE STUDIOS AREN'T EAGER TO HAVE THEIR MOST CONVINCING TRICKS EXPLAINED. HERE, PERHAPS FOR THE FIRST TIME, THE FACTS ARE TOLD ABOUT "PROCESS" CARS

By Kenneth Kincaid

IT LOOKS like this on the screen . . .

. . . BUT PAT Neal and Ty Power are actually sitting in the aft end of a process car that's been chopped off at the rear doors and whose top is mostly open. Istanbul street can be seen through rear window, glare-controlling velvet gobos above. Film is "Diplomatic Courier"

TWO LOVERS snuggle deeply into the back seat upholstery. The car dips and rises over the surface of a famous street in Istanbul, and through the rear window you see the changing background of exotic streets and buildings as the car passes through the city. It's just twilight, the lights of the streetlamps and the passing cars' headlights brighten and fade on the lovers' faces. Then a new sound is added to the powerful purr of the car's engine—rain. The drops strike the rear window with increasing intensity, adding tension to the scene as the background blurs and Ty Power says huskily to Pat Neal, "I'll stand by."

This is not the script, but you need not be familiar with it to know how this shot was made. It's a cinch that a cameraman wasn't lying on the Cadillac's hood, lens through a hole in the windshield, capturing the breathless moment on film as the car jockeyed along the narrow, rain-drenched streets of the Turkish city. Rather, it was done like this.

First of all, the script called for a certain type of car and the studio got it. When, as in this case, interior shots are on the schedule, a duplicate of the car is obtained too, occasionally even built. Then the duplicate is sectioned, as skillfully as a butcher sections a side of beef. This is called the "process car," and it becomes a jigsaw puzzle of removable panels, so that camera and lights can play fully on the actors within the car. Then it's mounted on a platform which is itself mounted on numerous coil springs. Studio hands, manipulating levers, can rock the car up and down on the springs to give it whatever appearance of motion the script calls for, from hitting deep ruts to gliding over gently undulating roads and rolling hills.

In the studio's own film library there are thousands of feet of film shot, going and coming, night and day, on the principal streets of the world. If it's a moving, rear-window view of Istanbul's main drag that's wanted, one scene is quickly located in the files, transported to the set, and projected on what is called a "process screen." This is a normal projection screen, with one exception—the camera is located behind it. The screen, placed at an appropriate distance from the car plays off the required scenery in motion.

During actual shooting in the car, only the actors' voices are recorded. Other sound effects such as the purr of the engine, street sounds, the patter of rain, are dubbed in later under perfect control. A lighting technician equipped with a control panel loaded with rheostats watches the process screen for the glow of approaching streetlamps, headlamps, etc. He throws a light which brightens and dims on the actors' faces. A forest of regular camera

Photos Courtesy of
20TH CENTURY-FOX STUDIOS

DIRECTOR HENRY Koster gives the word to Clifton Webb, Tommy Rettig as the shooting of customized Lincoln Cosmopolitan begins at 20th Century-Fox location. This car is the "street version" of "Elopement" process job

BETTE DAVIS and Warren Stevens cruise in stationary station wagon with Los Angeles street scene in rear. Since the script of "Phone Call From a Stranger" called only for inside shots, the wagon's exterior was left unfinished

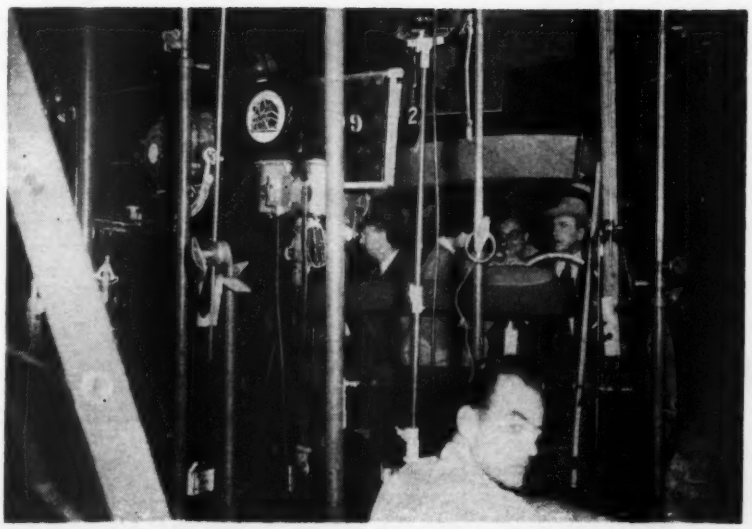
lights hems the car in, their glare controlled by big, black velvet, non-reflecting screens known as "gobos."

When rain effects are needed, a shallow wooden box is built beneath the process car's platform. It's lined with tarpaper to prevent leakage all over the sound stage floor and loaded with straw to deaden unwanted sound. Sprinkler pipes are arranged above the car as needed and the flow from their tiny jets can be regulated from drizzle to downpour.

A special effect that always brings the question, "How did they do it?" is that of the police or getaway car blazing and slicing through traffic, just missing street cars and busses. Process cars have nothing to do with these shots, which are made with a camera car (20th Century-Fox uses "K" Lincolns—they're solid, powerful, and smooth) following or preceding the "stunt job" with both traveling at legal speed. The camera is simply "undercranked"—an expression dating from the days when cameras were cranked by hand. When the film is re-run at normal speed the action is speeded up by a factor equal to the degree of undercranking used when the scene was filmed. A typical undercranked 30 mph will look like 50 or 60 at normal speed.

Who builds these convincing process bodies? Good question. Jim Ruman, who heads 20th Century-Fox's vast transportation department, puts Chief Dispatcher George McQuerry on the job. George was a designer with the Murphy coachbuilding firm during the heyday of glamor cars like Rolls and Duesenberg. With this background and a good staff of skilled mechanics, George cuts up process cars that can't be beat.

Next time you're in a movie watching action taking place inside an automobile that's burning up the miles as the scenery flashes by, try to visualize the hacked-up job in which the scene was shot—it's not easy. The entertainment industry has the job of selling illusion as reality and they have it down very, very pat. —K. Kincaid



STARK CONFUSION: With lights, gobos everywhere, Clifton Webb, radical architect who redesigns own car in picture, "Elopement," pilots Lincoln Cosmopolitan process job. Straw beneath car will absorb "rain," deaden splash

WHAT YOU CAN DO

YOU GIVE YOUR HOME BEAUTY AND INDIVIDUALITY. MORE PEOPLE JUDGE YOU BY YOUR CAR.

NOT LONG AGO a man in a brand-new 1951 Cadillac drove into my paint shop. His speedometer indicated seven—that's right, *seven*—miles. He ordered the original beige body painted a deep blue-green, the upholstery re-done in natural tan and the car rugs changed to green. The paint job alone carried a $400 bill.

The average person can't afford to indulge in such whims—nor need he. But color can do a lot for your car—depending upon the effect you want to achieve. It can extend or shorten the length, it can raise or lower the height, it can make it slimmer or stockier.

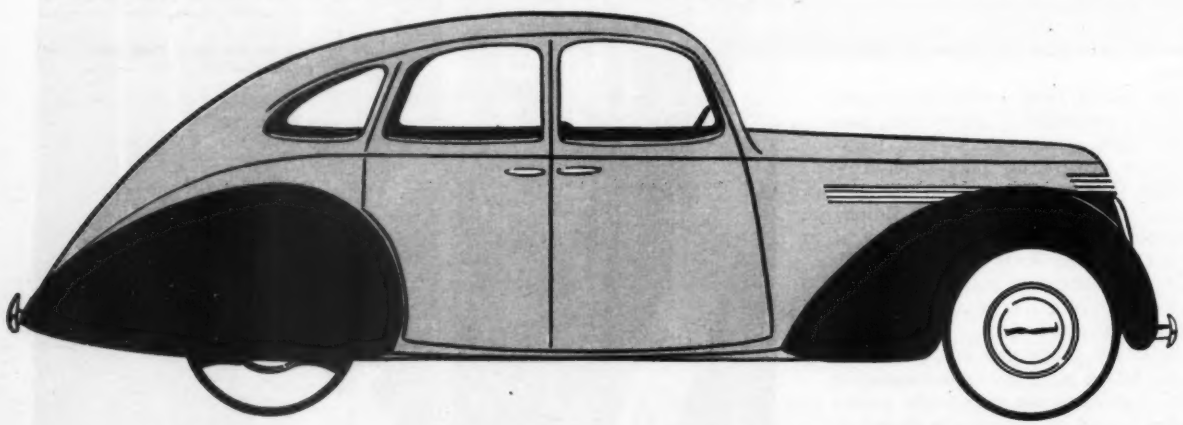
The old Ford joke "you can have any color you want—just so it's black" doesn't hold any more. Automobile manufacturers have found that color is an important item on the sales chart. The rainbow's the limit and today from nine primary toning colors you have a choice of more than 100 different shades and blends.

And it's not just all-over body color that's catching the imagination of Mr. and Mrs. Motorist, either. The "spear" effect in the new Buick, in which a curving, arrow-shaped chrome line is swept back from the hood, forecasts a whole new trend. The same effect can be. and has been, achieved with paint. The net result is a "foreign car" feeling, a cut-down door appearance and racy lines. The Buick has almost the same body as the Oldsmobile and Cadillac, but the "spear" gives it a new look.

Convertibles and DeVille types are also stimulating new ideas in the use of color. It's a well-known axiom that a dark-top convertible will appear to be higher than a light-top model. For that reason, most car owners prefer light-top jobs. A dark green or dark blue convertible with a black top, for example, will appear very square and boxy. But paint the body a beige or perhaps a light bronze and put a tan top on it—and presto . . . you'll swear the wheelbase has been lengthened a good 12 inches.

It's an optical illusion, of course. The reason is this: dark colors silhouette an object and your eye stops abruptly at the dividing line between the object and its background. On the other hand, light, neutral colors run or fade into the background and the eye continues past the edge of the object. It's the basis of the whole science of camouflage.

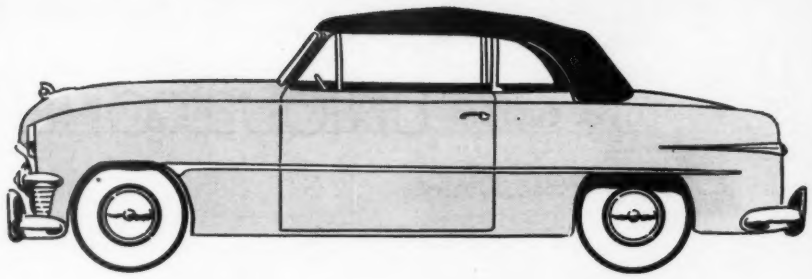
To show just how far you can go with new color effects, consider John M.

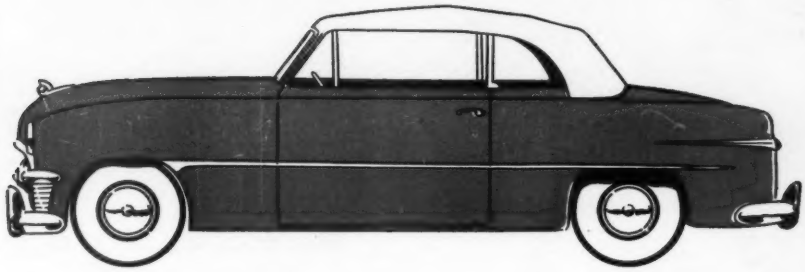


BLACK FENDERS seem entirely separate from light body. For most automobiles, this type of paint design is poor because it fights the smooth, one-unit effect the body-maker tried to achieve. However, on a roadster of '33 or earlier vintage, this two-tone system might look very sporty

DO WITH COLOR

By Vince Aldrin





TOP—dark top, light body gives car high, boxy look. The eye is drawn to the top, thus accenting height rather than length. BOTTOM—Light top does not attract attention, so body looks longer, lower. Proper attention to these effects is as much a part of your next paint job as the quality of the material used and the skill of the craftsman who applies it. Poor planning, wrong combinations of colors, can ruin the best work

Khoury of Buffalo, New York, and his 1951 Buick hard-top convertible. He striped the top with 168 ribbons of color—beige, brown and ivory—to make it resemble striped fabric. The job required 250 man-hours of labor and $300 for assistance and material. But Khoury has been richly rewarded by the people who cluster around his car in amazement when he's parked and the heads that swivel around when he's driving. So far he's rejected two offers of $1,000 each for duplicate jobs.

Striping is nearly a lost art—and it is hoped that the new interest in color will revive it. Before the advent of chrome in the early Thirties, most automobile manufacturers employed skilled brushmen who applied decorative stripes freehand. But

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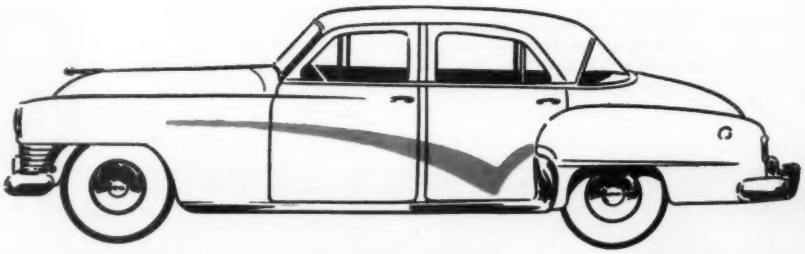


ABOVE—your eye is immediately caught by the spear and carried down, then up. Buick does it with chrome, but the same thing can be done with paint. Color of body will determine color of spear, which should be dominant

LEFT—Buick windshield is drawn in from the sides by expanding stripe of dominant color. Many other useful and attractive effects may be achieved with paint—but don't try any tricks unless you're an expert. Mistakes are costly

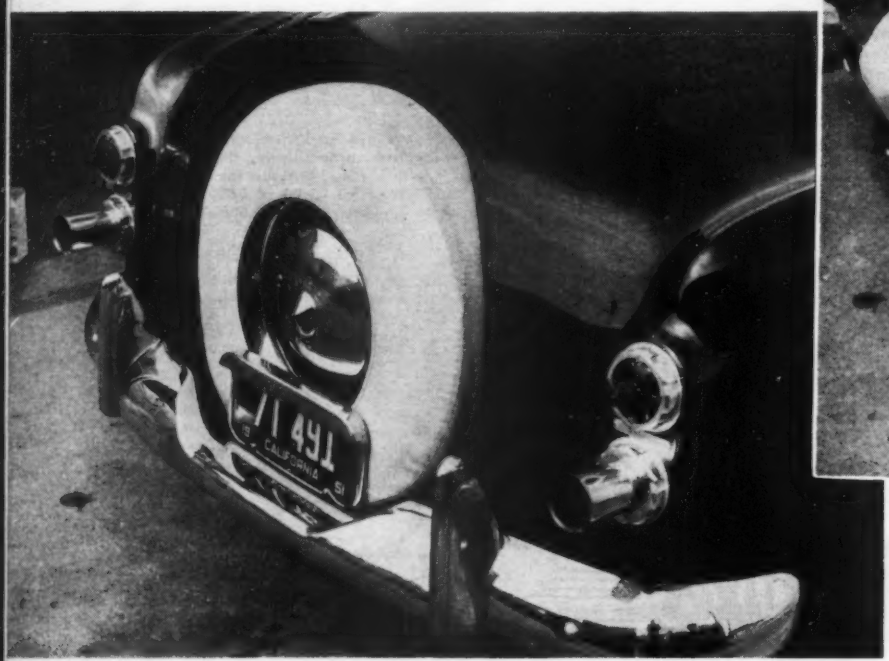
Drawings by Don Fell

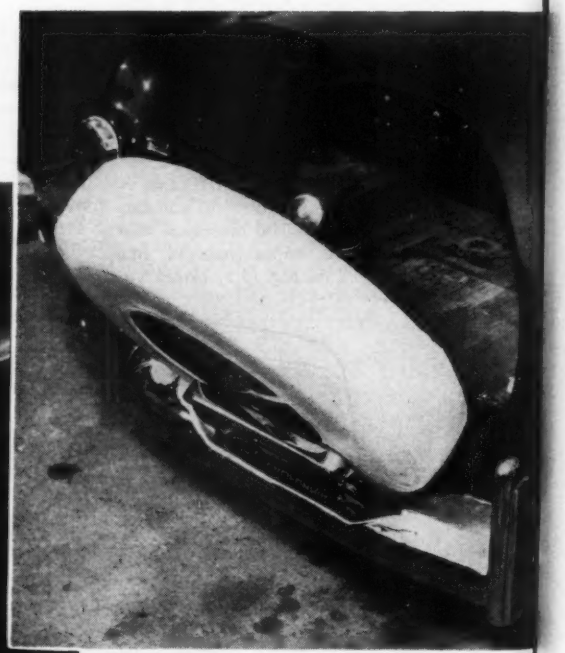
COVER CUSTOM—UNIQUE-CONSERVATIVE FORD

SIMPLICITY IN DESIGN, YET THOUGHTFUL ATTENTION TO DETAIL, IS KEYNOTE IN RAN WILBOURN'S RESTYLED CONVERTIBLE

Photos by Eric Rickman

SIMPLE GRILLE was made from late model Merc cross bar and sheet metal, hand-formed vertical bar. Attention to detail is evident in careful moulding of license plate to bumper. Sunken headlight units are accessible by removing attaching screws, dropping toward wheel





WITH THIS TYPE of spare tire, no trunk lid is apparent. When tire hinges down, it permits access to tool storage compartment, shut off from forward luggage area by a bulkhead

THIS '49 Ford convertible falls into unique-conservative category defined in December's MOTOR TREND. It has crash-padded dash, tail-pipes extending from rear fenders, hinged Continental spare

INTERIOR OF Ran's Auto Works car was finished in du Pont Fabrilite (simulated leather synthetic) by Keith Houser. Area back of rear seat is upholstered for protection of luggage. Underside of the boot that covers this area is lined with fine copper screen, which acts as radio aerial

STRIVING for the unusual, Ran Wilbourn designed the tail lights and exhaust pipes of complementary units. Exposed pipe is polished copper, which harmonizes with chrome trim and jet black paint. Ridges in fender forward of tail lights were removed by metal shrinking

FOUNDATION for the FUTURE

By Rollin Mack
Vice-President, Motorama Foundation

THE PHILOSOPHER has it: "Let a man build the better something-or-other and the whole world will beat his doors down." There's the consummation devoutly to be wished for Motorama Foundation now a-building.

The Foundation, as it exists today, is a plan of action . . . a blueprint drawn by a small non-profit group which incorporated in May of 1951 with this express purpose: to secure and develop a property which will house a paved timing strip, a road course to equal the finest European circuits, and a proving ground area for stock production testing in Southern California. The Foundation, as it will materialize in some early tomorrow, will be the installation which contains all these desirable features—available to all (timing associations, racing groups, manufacturers, and private citizens) on an impartial basis.

Such an installation has long been needed in Southern California. The speed enthusiasts who have pilgrimaged to the Dry Lakes since the early Thirties to hold their time trials, have watched with growing concern as the erosion and disintegration of lake surfaces has threatened the safety of their sport. The sports car and motorcycle groups have been hard put to find suitable locations where they could stage their competitions with safety and convenience to competitor and spectator. Automotive manufacturers have never had adequate facilities for practical testing of their products. Indianapolis specials from the shops of the famed California builders have had to wait till they went East for their run-outs and tune-ups. For the private citizen who has wanted to see what his new sedan could do, there has been no testing ground except the most dangerous of all—the public highway.

For years the members of the hot rod movement talked and dreamed of a paved timing strip—a strip with all modern safeguards and scientific timing equipment, a strip with rigid supervision to insure safety and encourage sound engineering a strip close enough to the metropolitan area to attract the thousands of interested spectators who find the Dry Lakes trek a little too long and rugged. With the deterioration of the Lake beds "wish" thinking became "must." In recognition of the need, Motorama, the great automotive show, and its commercial exhibitors of 1950 contributed a starting fund for such an installation. And it was decided at the outset that the installation should be designed to serve the interests of all who are concerned with motor sports and automotive development.

So Motorama Foundation, Inc. came into being with a directorate representing the many varied segments of the motor field. Serving on that board of directors are such men as Peter dePaolo, Rollie Free and Jim Lindsley of competition fame; Floyd Clymer of publishing celebrity; and Chuck Pollard of the California Highway Patrol, one of the real champions of motoring youth. The directorate is working to translate the idea into reality. Plans have been analyzed, land availabilities have been investigated, codification of rules has been written. With the professional aid of Henry Chapman Keck, well-known Los Angeles industrial designer, the ideas have crystallized and have been projected to the blueprint stage.

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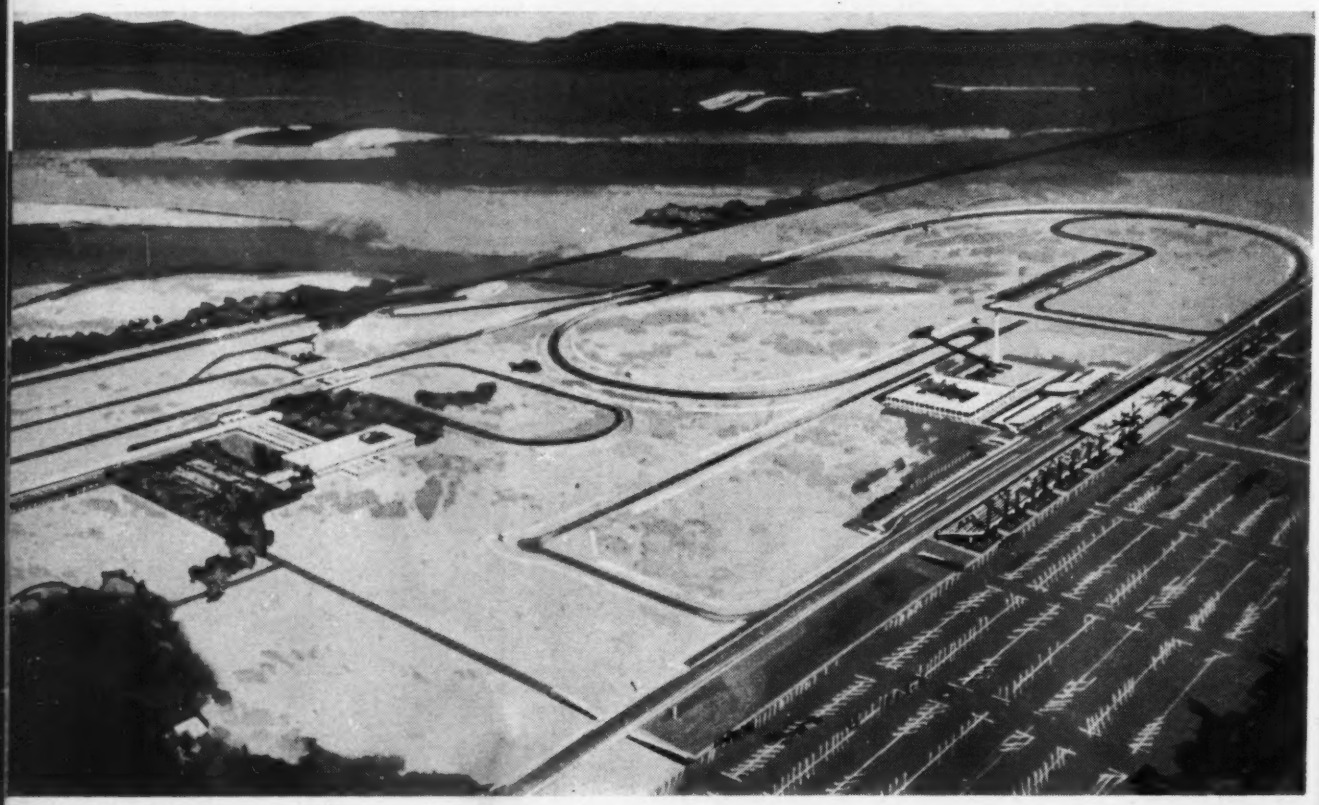


Chrysler built a better engine, engineered a better car in 1951. Motor Trials measurements supply the proof, tell how fourteen other cars rate.

By GRIFF BORGESON

THE BEST ENGINE will give you the best performance; the best brakes will bring you to the quickest stop. By actual tests, conducted with the aid of the most accurate instruments obtainable for the job, the new Chrysler V-8 is the best of a representative 15 of the 1951 American production cars.

What the scientist is to theory, the engineer is to practice. Our Motor Trials give you something even closer to your own needs: analysis of automobiles under actual service conditions. We take absolutely stock automobiles, equipped as you will buy them, and drive them as hard as you can possibly drive them. Only by taking an engine to the extreme limit of its resources can its true capabilities be found; only by cornering at high speed and repeatedly slamming on the brakes for emergency stops can handling qualities and safety be tested.

The figures in the following table are the results of tests, condensed and arranged to present the story of the 1951 cars as simply and clearly as possible. In each column, the 15 makes (missing are De Soto, Chevrolet and Plymouth) are listed in the order of their performance. In the last column, the summaries of the point scores (15 points for first place, 14 for second, all the way down to 1 point for 15th place) are given.

Chrysler's excellence begins with the first category in the table, average braking distance. Considering the weight of the big car, its top score is an outstanding achievement. Nash Statesman is second, far above its last-place big brother, the Ambassador.

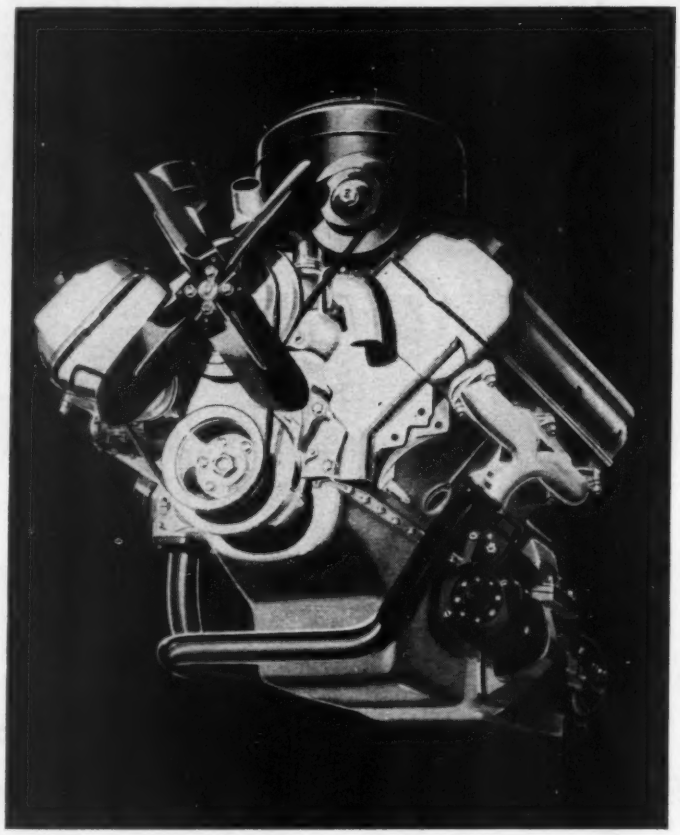
The fine Studebaker V-8 jumps into top position for average fuel consumption, pointing up the efficiency of its advanced design. Second is Kaiser, and this is not the lightweight Henry J. Chrysler pays for its large engine by placing fifth, just above Cadillac and far above that other big-engined powerhouse, Lincoln.

But in the next column, ton miles per gallon, superior engineering shows up more clearly. The figures in this column represent a measure of efficiency—how accurately the car's engine and gears have been matched to its size. The design

of Chrysler's combustion chamber and porting holds the greatest promise of real efficiency, and it works out this way in practice. So as to rate all cars on as nearly an equal basis as possible, fuel consumption figures in overdrive for cars so equipped were excluded. Had they not been, Lincoln would have led the field, as in the Mobilgas Economy Run. Except for Lincoln, the top five cars are postwar ohv V-8s.

Chrysler again is ahead of the pack with average acceleration, in spite of its superlative fuel economy. Hudson Hornet streaks up to second place but seems to ignore fuel costs in the process. GM's liveliest products follow and, right after them, Stude V-8. All of these ohv good performers are also fuel misers.

Well-balanced design pays off in yet another category—acceleration over the standing quarter mile. Chrysler's record demonstrates the sustained urge in the FirePower engine all the way into the higher speed ranges—an advantage gained again largely by advanced combustion chamber and valve layout. Hudson is almost a match, but not quite. Surprisingly enough, Lincoln moves up to third place, showing that low rpm, high gearing, and the reserve power of its big engine enable it to keep unwinding when other engines have passed their peak.



The top speed figures are not meant to be read by themselves. Acceleration and gas mileage must be considered, too, before the whole story is told: a car may have good top speed but lag in both other departments. It has been geared high so that it will go very fast at high rpm and turn over as few revs as possible at cruising speeds. But it has no snap. Then there's the car with good top speed, good acceleration, and poor fuel consumption. Either its engine is lacking in efficient design or is too small for the car's weight; fuel is burned wastefully. The car that combines superior top speed, superior acceleration, and superior fuel economy (as measured by ton miles per gallon) is its own proof of engineering excellence.

Too many automobiles are sold on the strength of an advertised horsepower figure, known to the trade as brake horsepower or, in shorthand form, bhp. Brake horsepower doesn't always get where it's supposed to go. The power that actually pushes you along the highway is road horsepower, as measured at the rear wheels. To measure this practical quantity, we use the Clayton dynamometer. The car's rear wheels drop between two rollers, instruments are attached to rollers and engine and the throttle is mashed. As the wheels turn, the rollers turn, and the power transmitted is measured accurately.

A question that occurs to many thoughful motorists is, "How can a car with 130 bhp deliver as much power to the wheels as a 150 bhp job?" The answer to this one is almost infinitely complicated but some things that decrease the amount of power which propels the car are engine auxiliaries and drive train: generator, fan, water pump, transmission, drive shaft, differential. Weight and its distribution are also critical factors.

Chrysler tops the list, of course, for brute force delivered to the wheels. This is not a major accomplishment since it has the highest bhp rating of any American production car, but in the ratio of road horsepower to engine size and car weight, Chrysler has done well. In the power to weight ratio and the road horsepower per cubic inch columns we find the award winner is tops. The last category is important because it is a measure, in part, of the efficiency of the engine itself. It tells how much work is being extracted from each basic unit of the engine's swept volume. Chrysler's position at the top is largely due to its excellently designed valve and combustion chamber region.

BMEP stands for "brake mean effective pressure," a technical term which represents the average "push" on the head of the piston during its power stroke. This figure reaches a maximum at a certain rpm—just what the rpm figure is varies from engine to engine. Naturally, when more pressure is applied to the head of the piston, more power is transmitted to the crankshaft and, eventually, to the rear wheels.

Nothing is included in this table which cannot be measured or calculated. We've tried to take the guesswork out of the most difficult decision you have to make when you buy an automobile—the choice of a good engine. We're on your side. Manufacturers have long disregarded their responsibility to the buyer by trying to hide facts behind phrases. FirePower, Rocket, Hornet, Fireball; these say nothing. Acceleration figures, stopping distance, gasoline mileage; these tell the story.

There are many things the MOTOR TREND Award does not cover—safety, suspension, upholstery, appearance, durability, comfort, ease of driving, visibility. Some of these are a part of styling, not engineering, and no accurate measurements of such factors have yet been devised. They are largely a matter of opinion and when it comes to selecting *your* car, *your* opinion is the most important. In our Motor Trials, we do give opinions on everything which cannot be measured, opinions which are arrived at through long experience with automobiles, after careful comparison with competing makes tested. But we do not feel that an important award can be based, even partially, on opinion.

Chrysler has built a car that combines safety, economy, and outstanding performance. It is not perfect—yet it is closer to the goal than any other family automobile currently produced in America. It cost the Chrysler Corporation a lot of money to build the new V-8; it took a lot of courage to flout tradition and experiment with design. The Award winner is, in concept, a major step ahead in American automotive history. We are proud to present to the Chrysler Corporation MOTOR TREND'S 1951 Award for Engineering Achievement.

AVERAGE BRAKING DISTANCE IN FEET	AVERAGE FUEL CONSUMPTION IN MPG	TON MILES PER GALLON	AVERAGE ACCELERATION IN SECONDS	ACCELERATION OVER STANDING ¼ MILE IN SECS.	AVERAGE TOP SPEED IN MPH	MAXIMUM ROAD HP	% OF BHP AT WHEELS	DOLLARS PER ROAD HP	LBS. PER ROAD HP	MAX. TORQUE IN LBS.-FT.	ROAD HP PER CU. IN.	MAX. BMEP IN P.S.I.	TOTAL POINTS
Chrysler 90.2	Studebaker 21.41	Chrysler 39.9	Chrysler 10.63	Chrysler 19.32	Chrysler 102.27	Chrysler 104	Oldsmobile 68.1	Studebaker 30.8	Chrysler 42.7	Cadillac Chrysler 312	Studebaker .448	Cadillac Chrysler 142.0	Chrysler 176
Nash Statesman 91.4	Kaiser 19.70	Cadillac 39.1	Hudson 12.52	Hudson 19.41	Hudson 97.09	Lincoln 95	Mercury 67.9	Lincoln 31.3	Hudson 43.1	---	Chrysler .314	---	Oldsmobile 153.5
Hudson 96.3	Nash Statesman 19.07	Lincoln 37.4	Oldsmobile 13.70	Lincoln 19.90	Lincoln 97.08	Cadillac Oldsmobile 92	Studebaker 63.2	Oldsmobile 31.7	Studebaker 43.2	Lincoln 275	Oldsmobile .303	Nash Ambassador 134.8	Studebaker 145
Ford 103.2	Ford 18.28	Oldsmobile 35.2	Cadillac 14.72	Studebaker 20.67	Cadillac 95.44	---	Hudson 62.0	Hudson 32.08	Oldsmobile 43.7	Oldsmobile 263	Mercury .297	Oldsmobile 130.7	Hudson 135
Dodge 104.3	Chrysler 17.98	Studebaker 35.1	Studebaker 15.10	Oldsmobile 20.93	Packard 93.17	Hudson 90	Lincoln 61.6	Chrysler 34.0	Lincoln 46.0	Hudson 257	Hudson .292	Buick 129.0	Lincoln 131.5
Oldsmobile 110.5	Cadillac 17.70	Kaiser 33.3	Packard 15.15	Kaiser 20.99	Studebaker 92.78	Packard 80	Packard 59.1	Ford 34.4	Cadillac 48.0	Packard 230	Lincoln .282	Dodge Studebaker 127.5	Cadillac 130
Kaiser 110.8	Oldsmobile 17.50	Pontiac 33.0	Buick 15.20	Packard 21.04	Oldsmobile 92.54	Mercury Studebaker 76	Ford 59.0	Mercury 34.8	Mercury 49.5	Pontiac 220	Cadillac Packard .277	---	Packard 96.5
Studebaker 111.2	Dodge Pontiac 17.20	Dodge 32.5	Ford 15.31	Ford 21.19	Mercury 91.18	---	Pontiac 58.6	Pontiac 34.9	Packard 51.1	Buick 217	---	Kaiser 126.7	Kaiser 91.5
Pontiac 115.1	---	Buick 32.4	Kaiser 15.40	Cadillac 21.22	Pontiac 87.72	Buick 70	Buick 58.3	Buick 35.5	Kaiser 54.5	Nash Ambassador 210	Kaiser .273	Hudson 125.8	Mercury 90.5
Mercury 116.0	Lincoln 17.07	Nash Statesman 31.2	Lincoln 15.44	Mercury 21.74	Ford 87.25	Pontiac 68	Chrysler 57.9	Cadillac 39.4	Ford 55.9	Mercury 206	Buick .266	Pontiac 123.6	Ford 85
Packard 121.7	Nash Ambassador 16.30	Ford 30.2	Pontiac 16.40	Nash Ambassador 21.75	Nash Ambassador 86.95	Kaiser, Nash Ambassador 62	Cadillac 57.4	Packard 39.8	Pontiac 56.4	Dodge, Studebaker, Kaiser 190	Nash Ambassador .265	Lincoln 123.2	Pontiac 84.5
Cadillac 124.4	Buick 16.20	Packard 30.1	Mercury 16.85	Buick 21.87	Kaiser 83.57	---	Kaiser 54.0	Nash Ambassador 34.9	Buick 57.1	---	Pontiac .254	Mercury 121.6	Buick 78.5
Buick Lincoln 128.1	Packard 14.69	Nash Ambassador 29.8	Nash Ambassador 17.96	Pontiac 22.03	Dodge 83.41	Ford 59	Nash Ambassador 53.9	Kaiser 35.9	Nash Ambassador 58.9	---	Ford .247	Packard 120.4	Nash Ambassador 61.5
---	Mercury 14.62	Mercury 27.5	Dodge 19.03	Dodge 23.68	Buick 82.97	Dodge 50	Dodge 48.5	Dodge 53.4	Dodge 75.6	Ford 181	Dodge .216	Nash Statesman 114.8	Dodge 57
Nash Ambassador 130.9	Hudson 14.07	Hudson 27.4	Nash Statesman 21.98	Nash Statesman 24.47	Nash Statesman 77.19	Nash Statesman 39.5	Nash Statesman 46.5	Nash Statesman 60.7	Nash Statesman 82.3	Nash Statesman 140	Nash Statesman .214	Ford 113.6	Nash Statesman 44

NOTES: All cars tested were four-door sedans. Series and types of transmissions were: Buick Special, Dynaflow; Cadillac 62, Hydra-Matic; Chrysler New Yorker, Prestomatic; Dodge Coronet Diplomat, Gyro-matic; Ford, Fordomatic; Hudson Hornet, Hydra-Matic; Kaiser Deluxe std. with overdrive; Lincoln 74, std. with overdrive; Mercury std. with overdrive; Nash Ambassador, Hydra-Matic; Nash Statesman, Hydra-Matic; Oldsmobile Super 88, Hydra-Matic; Packard 200, Ultramatic; Pontiac Eight, Hydra-Matic; Studebaker Commander, Automatic Drive.

AVERAGE BRAKING DISTANCE IN FT.: Averages of our published braking figures which themselves were averages of many stops from speeds of 30, 45, and 60 mph

AVERAGE FUEL CONSUMPTION IN MPG: An average of scores of readings made with each car under operating conditions ranging from stop and start driving in heavy traffic to a steady 60 mph on the open highway. Mpg with OD not counted.

TON MILES PER GALLON: $\frac{\text{car weight in tons X distance travelled in miles}}{\text{fuel consumed in gals.}}$

AVERAGE ACCELERATION: Average of all acceleration figures.

AVERAGE ACCELERATION FOR STANDING ¼ MILE: Average of two-way runs from standing start over measured ¼ mile.

AVERAGE TOP SPEED: Average of two-way flying runs over measured ¼ mile.

MAXIMUM ROAD HP: Engine power output delivered at driving wheels on Clayton chassis dynamometer.

PER CENT OF HP AT DRIVING WHEELS: $\frac{\text{Rhp}}{\text{Bhp}} \times 100.$

DOLLARS PER RHP: $\frac{\text{West Coast delivered price}}{\text{rhp}}$

LBS. PER RHP: $\frac{\text{Weight of test car in lbs.}}{\text{rhp}}$

MAXIMUM TORQUE IN LBS.-FT.: From Automobile Manufacturers Assn. specifications.

RHP PER CU. IN. OF ENGINE DISPLACEMENT: $\frac{\text{rhp}}{\text{cu. ins. displacement}}$

MAXIMUM BMEP: From Ethyl Corp. "Brief Passenger Car Data 1951."

STEVENS' CLASSES, originally designed for immigrants, are attended by all age levels. Here, this old fellow has run over a pedestrian and Stevens is pointing out the reason. The model pedestrians in Stevens' classes have a high mortality rate but save human lives

MODEL DRIVING SCHOOL

action, not words, is the formula that has brought success to America's most novel driving school

Text and Photos
By Robert Lee Behme

A HEAVILY LOADED truck darted to the left at the busy intersection. Tearing along the street from the opposite direction a speeding sedan saw the truck and tried to stop. There wasn't enough room. They collided solidly at the intersection.

"There," cried La Marr Stevens, Senior Inspector for the California State Patrol, "Did you see that? Now back up and try it again."

The two drivers reached down and picked up their vehicles. The truck driver, a shy, short woman, carefully placed the truck beside the stop sign at the intersection.

"I had my hand out for a left turn," she said to Stevens.

"But you failed to look both ways before you darted into the street," Stevens told her.

The driver of the speeding sedan set his car down in the street a few feet from the accident. He was a stoop-shouldered, bearded, elderly gentleman who looked worried.

"She raced out in front of me," he mumbled.

"You were traveling too fast," Stevens pointed out.

There was no damage done at that crash. Such accidents, in fact, are common at the driver education classes held at the Roosevelt Adult Evening School in Los Angeles, Calif. Under the direction of La Marr Stevens, who by day superintends driver examinations at a local State Patrol office, the classes are sparked with all of the enthusiasm of novice drivers behind the wheel for the first time, yet Stevens' classes are taught with toy models pushed along highways chalked on the classroom floors.

"When the classes first started, three years ago," Stevens says, "I knew that a bunch of do's and don't's thrown at the students would do little good. I wanted them to learn so well they'd never forget. To do that I tried to make the classes a game."

The classes are a game to the students, yet a strong feeling of reality surrounds the exercises. The drivers worry and strain as they guide their tiny cars down the busy midget streets. To them the traffic problems they encounter are as real as if they were driving an expensive Rolls-Royce down Los Angeles' busy Wilshire Blvd.

Stevens tries to keep every aspect of his classes alive with reality. He feels a good driver should be prepared for the unexpected so he brings odd gadgets into his classroom to intensify the feeling of actually being on the road.

Soon after the classes opened, Stevens smuggled a fire engine siren into class. While the students were busy maneuvering their cars down the streets Stevens brought the siren from hiding. He gave the handle a hard whirl and as the low wail grew louder he shouted "Pull over to the curb." His students were so startled that several of them, in their haste to "pull over," picked up their tiny models and galloped to their seats.

The classes were originally designed as vehicle code instruction for new citizens who, coming from other countries, knew how to drive but did not know the California code and could not read English. Teaching such students meant that Stevens had to use graphic illustrations to get his points across.

Soon his method of showing rather than telling became so popular that his students were an equal mixture of naturalized citizens learning the code and local citizens learning to drive. As his classes progressed more and more high school students and housewives were attending to study for their state examinations until the ratio of foreign drivers unable to un-

IMPROVISING IS one of Stevens' secrets. There are no midget stop lights in Stevens' town so he uses a flashlight and a sheet of red cellophane to signal his intentions to students eager to learn safe driving habits

THE SCHOOL is held in a regular classroom at the Roosevelt Adult Evening School in Los Angeles. When students are not driving they sit around the model highways and cities and watch Stevens illustrate his points

derstand the language is now very small.

"A popular misconception seems to be that the only new drivers are high school kids," Stevens explains. "Nothing could be farther from the truth. The percentage is high for the middle-aged couples who once owned a car and gave it up until now, years later, they want to learn to drive again. The vehicle is their first concern."

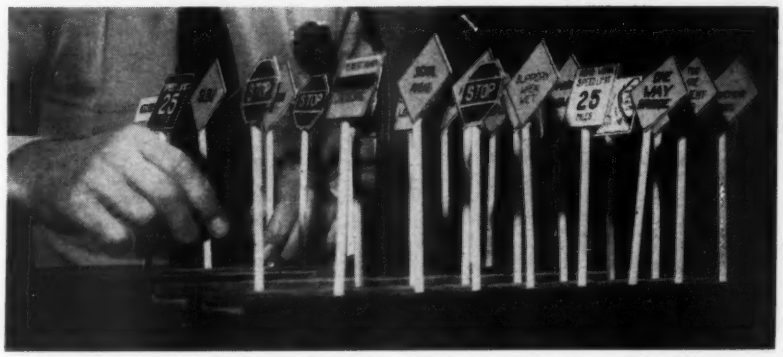
Once a student begins Stevens' classes he rarely misses a lesson. Stevens' attendance records are the highest for any class at the school. His students, who include farmers, laborers, housewives, and professional men, are eager to attend the school seven weeks so they may go for their state examinations.

Novice drivers in Stevens' class seem most interested in safe driving practices. He not only informs them of the state laws covering every conceivable situation, but also shows them the reasons for the laws by making them place their cars under similar circumstances.

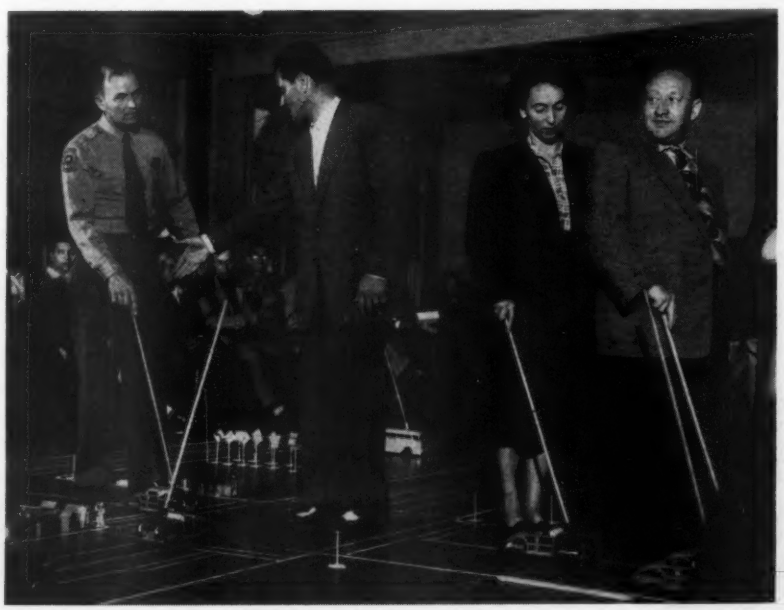
"This type instruction makes a more understanding driver," Stevens says, "It shows him why a law was written and its importance to a community."

The school at Roosevelt Adult Evening School is sponsored jointly by the California State Highway Patrol and the Los Angeles Board of Education. Stevens feels that such an affiliation would work in any city but that support could also be underwritten by civic groups.

"A series of these classes across the country would work motoring miracles," Stevens adds. "Just imagine—in seven sessions they'd be turning out wiser, more courteous drivers." —Robert Lee Behme



CLASSES ARE filled with devices to make the model motoring seem real. Gadgets include everything from tiny china pedestrians to midget traffic signs of every type and a wailing siren



NO MATTER where one goes, it's the driver's prerogative to argue with the cop. In Stevens' classes the driving is so real his students often argue when he tells them they've broken the law

STENGEL'S SEDANCA

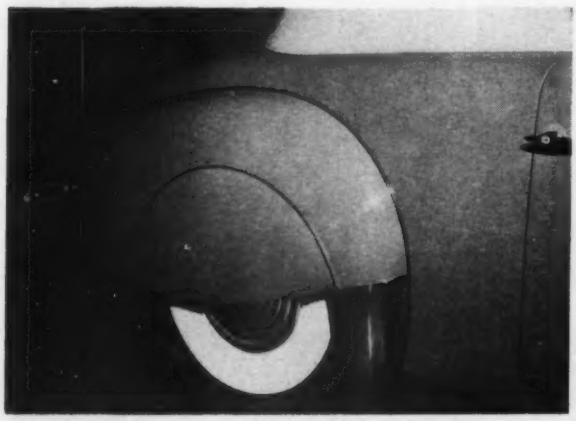
ELEVEN-YEAR-OLD STENGEL-COACHCRAFT CUSTOM IS STILL A CROWD-STOPPER TODAY

BROWN, UNBORN hair-calf is matched with top-grain cowhide in sedanca's lush upholstery. Three-position top, really has continental look, gives rear-seat passengers privacy, shelter

ANYONE WHO isn't familiar with the background of the slick, red custom beauty that holds the center spot on our cover this month is likely to be a bit jolted to learn that the car was built in 1940. Coachcraft of Hollywood carried out the work for designer-owner Peter Stengel. The '41 Merc engine was then given full-house Eddie Meyer treatment by Jeohnck of Santa Barbara, resulting in performance to match the car's unique appearance.

Stengel refers to his creation as a *"sedanca de ville."* Perhaps the most striking single feature of the bodywork is the harmonious flow of all its graceful curves. Next in impressiveness is the handsomely-formed, three-position top which can be removed entirely, can fully enclose the passenger compartment, or can shelter only the rear-seat passengers. Stengel estimates that it would cost over $1000 today to build a windshield frame from scratch such as he has on his *sedanca*. First, the frame was carefully designed on the drawing board; next, patterns were made; then came bronze castings made from the patterns, finally, polishing, fitting, and chroming. The designer claims that there isn't a stir of breeze in the cockpit even at 70 mph!

Stengel drove the *sedanca* for only a few months when a famous multi-millionaire made an irresistible bid for the car, bought it, drove it until 1950 when it passed back into its designer's hands. When asked, "What value do you place on the car?" Stengel replies with, "Henry Ford II spent twenty grand to duplicate it." And when asked if he still likes his car after 11 years he snaps, "Why not? It still draws more 'ohs' and 'ahs' than the newest and best foreign cars in Hollywood."

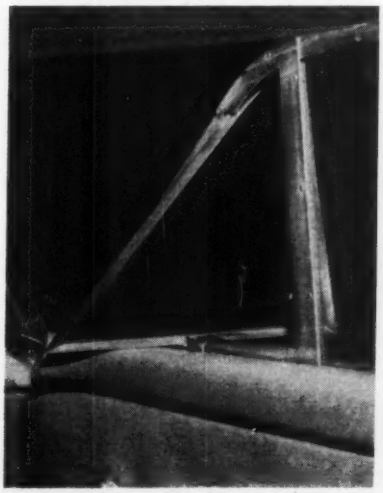


UPSWEPT FENDER skirt adds greatly to Stengel car's "dash," is in harmony with contour of top in best continental coachbuilders' tradition

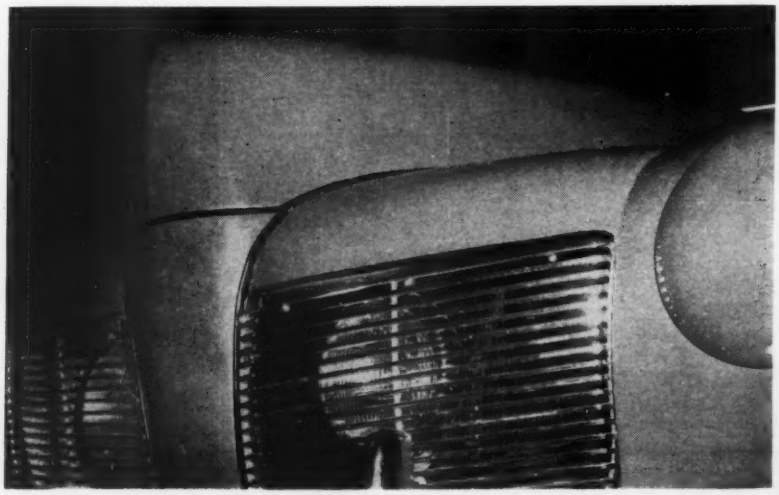
FULL REAR view emphasizes careful matching of curves—compare fender curves with those of top. Chrome sparingly used, gets unique treatment

FRONT PORTION of three-position top consists of two separate pieces. Left-hand section only has been installed here, to illustrate unusual construction. The dash is crash-padded to match upholstery

EVEN THE windows were rebuilt in the Stengel sedanca. Notice handwork around no-draft panes which roll down, along with window



CAPS OVER stock headlights were suggested by similar devices used on European road racing machines, are intended to add to impression of "raciness." Functioning headlights are mounted behind grille, a not-infrequent European practice. Car's power is from a full-house Mercury engine



OVERSEAS NEWSLETTER by A. Devereux

WORLD'S ROAD RACING champion, 1951, is Argentina's Juan Manuel Fangio, whose fabulously steady driving throughout the season catapulted him into top place ahead of the most seasoned veterans competing internationally

- **Barcelona Grand Prix**
- **Nash-Healey Revised**
- **Spain's New Pegaso**

SPORT: All the dramatic adjectives in the racing vocabulary could have been applied to the Spanish Grand Prix at Barcelona's 1¾-mile Pedralbes circuit. It was decisive and climactic, the final event of a zig-zag season in which Alfa-Romeo's heretofore unchallenged post-war superiority had finally been met and twice outmatched by the fiery Ferraris. It was a race between the two great makes for the Championship of the World; lesser breeds fought their lesser battles several laps behind. And the Spanish G.P. was, as it turned out, a heartbreaker for Ferrari.

The first laps were furiously paced. Fabulous Fangio, the ex-cab driver from Buenos Aires, pushed his Alfa into the lead at the fourth lap, with Ascari's Ferrari right behind him. And then tire troubles for the Ferrari team began. Taruffi's were the first to go, then Ascari's, then Villoresi's, and finally, in the 14th of the 70 laps, Gonzales'. The unexpected minutes it took the efficient but overwhelmed Ferrari pit crew to change rubber were disastrous. After Ascari's first pit stop Farina (Alfa) took and held second place almost until the end. When he went out briefly to refuel. the wild. leadfooted Argentinian Froilan Gonzales seized his opportunity, hurtled into second place, and almost overtook Fangio. But not quite. At the end it was Fangio first, Gonzales second, Farina third, and Ascari fourth. Fangio, and Alfa-Romeo, are the Champions of the World.

RODOLFO MAILANDER

TREMENDOUS STRAIGHTAWAY on Barcelona's Pena Rhin circuit is lined by equally mammoth crowd. Over 200,000 spectators witnessed the decisive race of the grand prix season in Spain

ENGLAND: Britain's answer to the Nash-Healey might be called the Alvis-Healey: the new Healey model uses Alvis' three-liter (183 cu. in.) power plant and is an all-British version of the much-publicized hybrid. Body lines too are sufficiently all-British to please all but the most conservative. There is more restraint in the use of chrome, deriving chiefly from the substitution of a more simple grille and elimination of the Nash airscoop. Add this to the fine effect of Lucas long-range headlamps, and the result is a vastly different frontal appearance. . . . Speaking of restraint, or the lack of it, the Healey clean-up is in opposition to what seems to be a growing trend toward more and gaudier brightwork on English cars—what in Britain is somewhat euphemistically called "the transatlantic look." *The Motor* (London) has a more candid description: "The Sterling Grin."

But ostentatious opulence doesn't require "transatlantic" inspiration. Hooper and Co., coachbuilders to the King of England, and also to the less blue-blooded royalists of the economic variety, have dressed a Daimler chassis in a traditional-lined body that will give the chrome-and-cocktail-bar boys some sleepless nights. It's a big black limousine, and instead of chrome it's garnished with gold. Headlights, radiator shell, bumpers, trim—all are gold-plated, and the side panels are spangled with little gold stars. The interior is upholstered in hand-woven golden silk coteline; cabinet work is in Australian camphor wood. And instead of cocktails, it's tea: the passenger compartment is fitted with cabinets containing a black-and gold China tea service, a gold-plated Thermos tea jug, gold-decorated cut-glass jars and decanters, and fine Irish table linens. The trunk is occupied by gold-mounted, silk-lined crocodile-hide suitcases. Reaction to the car, when it was shown at the Earls Court Motor Show, was mixed. The London *Times* sniffed, "Vulgar!" "Not at all," replied the Daimler's owner, "We do extensive traveling on

SCARCELY RECOGNIZABLE as a British Bentley is this coupe body by Facel-Metallon of Paris. This firm operates one of France's largest body works, mass-produces car bodies for both Dyna-Panhard and Simca

the other side of the Atlantic."

About to be produced is an open four-seater (touring car, if you prefer) version of the Morgan. This car has what is described as "sliding-pillar" independent front suspension, which suggests Lancia-Ford Consul influence. Its frame is lower than the main suspension members, its chassis based on Z-section side members.

Collections of their road tests for 1951 have been published by both *The Motor* and *Autocar*. *The Motor's* book has 24 tests, including the Cad-Allard J2 and the Aston-Martin DB2, and *Autocar's* has 30; each is worth the all-out attention of the English-car enthusiast. Publishers' addresses on request.

FRANCE: The first post-war Bugatti was bitterly disappointing to many addicts of the marque who'd awaited its coming with much proud anticipation. The chassis is basically the same as that of the superlative pre-war 57C, but the new body represents total capitulation to the cliches that typify today's design. Bugatti himself managed during his lifetime never to forsake the *automobile* in the external design of his cars; they never were bathtubs or refrigerators adapted to four wheels. The builders of the truly classic automobiles of all time have always refused to be seduced by the grotesque extremes of modern styling that have produced the "streamlined" electric iron and the "aerodynamic" plastic radio cabinet; and while Rolls-Royce and Mercedes, for example, continue to remain loyal to the traditions which are honestly and functionally those of the automobile, the first post-war Bugatti does not.

Ingeniously engineered is Salmson's new "Randonée" model. Its power plant is a 2.2-liter (134 cu. in.), four-cyl., light-alloy engine with twin overhead cams which

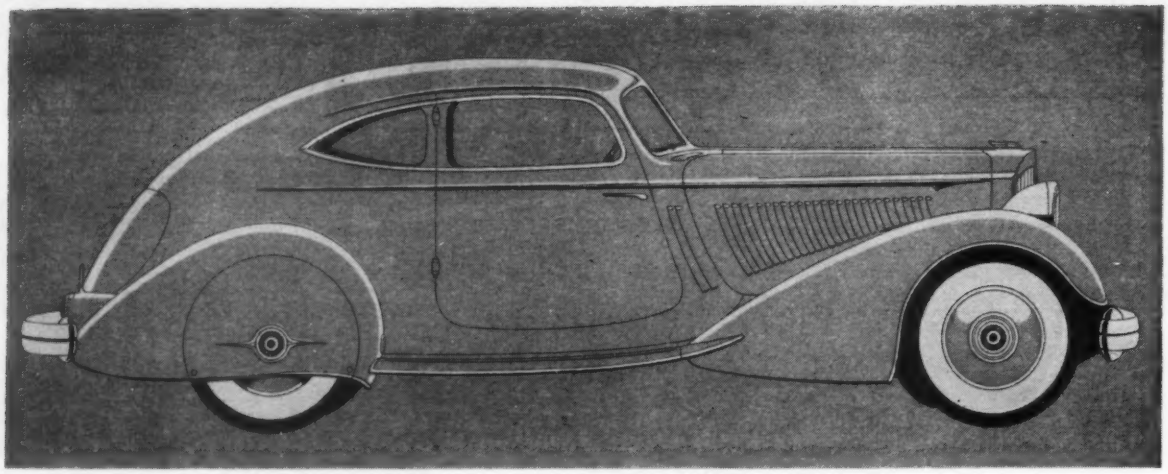
(Continued on page sixty-two)

RODOLFO MAILANDER

'51's CHAMPION ENGINE is the two-stage blown 91-in. power plant of Alfa-Romeo's "Alfetta." Note induction system air intake now located on cowl. In case of rain, water is automatically separated from air, drained away

A. H. LELAND, COVENTRY

ALL-BRITISH version of the Nash-Healey is powered by an Alvis engine, uses different grille, eliminates hood airscoop, much chrome



THE SPORTS COUPE, body by Packard, first appeared in the '34 "custom" catalogue. This is the only known Twelve that flouted tradition

CLASSIC COMMENTS . . .

THE PACKARD TWELVE

BY EUGENE JADEROUIST

Illustrations from the Arthur Twohy Collection

THE YOUNG MAN piloted the big car up the driveway and brought it to a smooth stop behind a stripped-down Buick. A tall, ruddy mechanic detached himself from a group of loungers and sauntered over to the newcomer.

"You fix Packards?" the young man asked eagerly.

"Sure," said the mechanic.

The young man probed further. "Old Packards?"

"Any Packard," the mechanic countered.

The young man heaved a small sigh. "Well, I've got this '36 sedan," he began, "one of the big 12-cylinder models, and . . ."

The mechanic held up his hand. "Packard never made a 12-cylinder car," he announced.

The young man gaped in astonishment, then snapped his jaws shut firmly. "Oh, I'm sorry," he responded, "my mistake." And he kicked the starter of his Packard V-12 and drove away.

Today, 12 years since the last Packard V-12 rolled off the semi-automatic assembly line, most automobile owners and a few enthusiasts have forgotten that the big 07 and 08 series cars ever existed in the catalogue. Packard seems to want it that way, too. None of their advertisements have ever referred to the past glories of the marque, or tried to draw a parallel between the handsome compromise classics of the past and the chubby rascals that bear the name today. Along with Cadillac, Chrysler and Lincoln, America's leading luxury car of the Twenties and Thirties is looking ahead.

Just how far ahead Packard has its sights trained is indicated by a publicity release that came across the classic car desk on its way to the file. In the next few months, the company will spend $4,500,000 in a tightly-planned advertising campaign to boost the 1952 models. It's no secret in the industry that this is a crucial year for the Patrician, the 300 and the 200.

Crucial years were something Packard never knew until 1932. They seemed to have a tight corner on the luxury market, as solid a hold as Cadillac enjoys today. In 1929, it was Packard over Cadillac three to one, and the net earnings reached $25,000,000. Not until 1936 did Cadillac forge ahead, but Packard was too busy pushing its new 120 and preparing for the debut of the 110 to care much about its prestige line anymore. Total production that year in the Senior Lines was 10,000 units—just enough to lend class to the low-price units which depended on the reputation of their superiors for the initial push into the competitive market.

Production figures for 1936 are interesting. There were 2500 men required to produce the Super Eights and Twelves, a rate of four cars per man per year, while 2,600 other employees were knocking out 70,000 of the cheaper jobs, a rate of almost 27 per man per year. There, more clearly than words, cold figures tell the difference between quality and quantity. The Twelve cost only $3500 that year, but look at the price of labor—a top upholsterer made 96 cents per hour. The same car today would have to be at least twice as expensive.

It is hard for the younger citizens to realize how much prestige went with the Packard name in the middle Thirties. Experts estimated that the Packard name was a commodity second only in value to the Ford title. That they were not far wrong was proved when 10,000 buyers ordered the new 120s sight unseen. Those were the days when cars had to be *sold*, because the dealers' floors were crammed with brand new models. A shortage was unthinkable. So when 10,000 people were willing to spend a total of $10,000,000 FOB on a name, the solid cash value of a carefully built-up reputation was demonstrated.

"The Packard you buy today will be new 10 years from now" is a paraphrase of one of the firm's most famous advertisements. It was no empty boast. The '24 phaeton Dad bought new carried a family resemblance to his son's '34. If Mrs. Applemeyer of the South Shore Applemeyers blew $8.000 on a brougham, it was used for at least five years and still impressed the masses. While competitors peppered their ulcers thinking of new gadgets, gimmicks, and chrome ornaments to attract Packard's loyal clientele, Twelve followed Eight followed Six off the Packard line in the same bodies. Earlier, at one point in

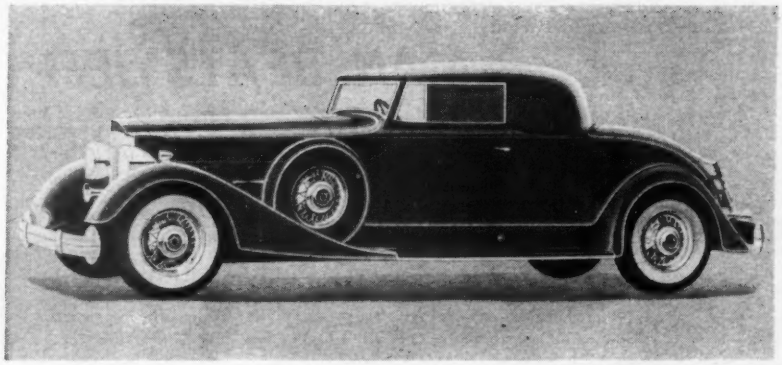
the mid-twenties, Buick tried to market a model that looked surprisingly like the latest Packard. They were induced to change a line here and a line there—enough to kill the resemblance.

A commentator of the period remarked: "In decades of experimenting, no designer of volume cars has made much better functional sense than Packard, which has made none at all, being merely good-looking." Handsome would be a better word. In the year that *Classic Comments* has been a regular feature of MOTOR TREND, more readers have reported owning classic Packards than any other make of car. Cadillac, Lincoln, Pierce-Arrow, Chrysler are far in the rear. Great interest has been shown in Duesenberg and Rolls-Royce, but many who want information about those caviar cars are simply non-owning admirers.

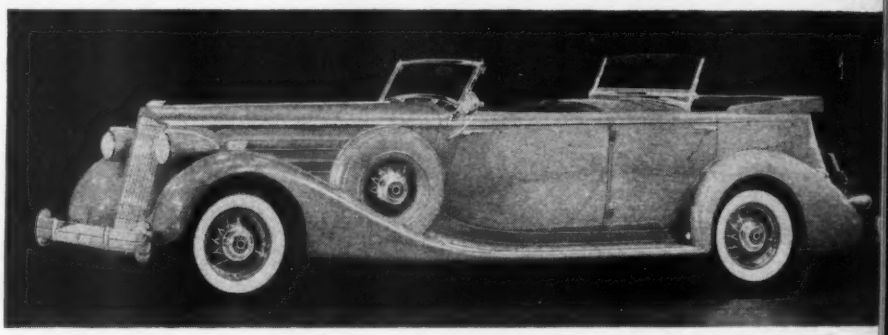
If the most popular car is Packard, the most popular Packard is the Twelve. Not the Twin Six that was introduced in 1915, but the over-powered, overweight thunderers that were kicked off in 1932 to celebrate the lowest year of the worst depression and allowed to pass quietly from sight in 1939, the first year of the greatest prosperity this nation has ever known.

In the Twelves were all the goodies Packard could afford. The engine was rated at 175 bhp at 3200 rpm, enough brute torque to twist the average driveshaft like taffy. But the Packard shaft and gears and clutch were built to withstand all the abuse the behemoth engine could offer and still be almost new when the power was all gone. Inside the engine, the pistons were of a special peaked-top shape, supposedly giving more efficient combustion. Hydraulic adjusters cushioned the pushrods to hold noise down to just slightly more than Rolls-Royce level. Even today, a Twelve with over 100,000 miles seems to breathe as it runs along at any speed up to 70. Idling—so silent that more than one new owner has punched the starter button in vexation only to be rewarded by a horrific scream from the offended starter gear as it hits a flywheel that is very much alive and turning. There just isn't any vibration if the engine is well-tuned.

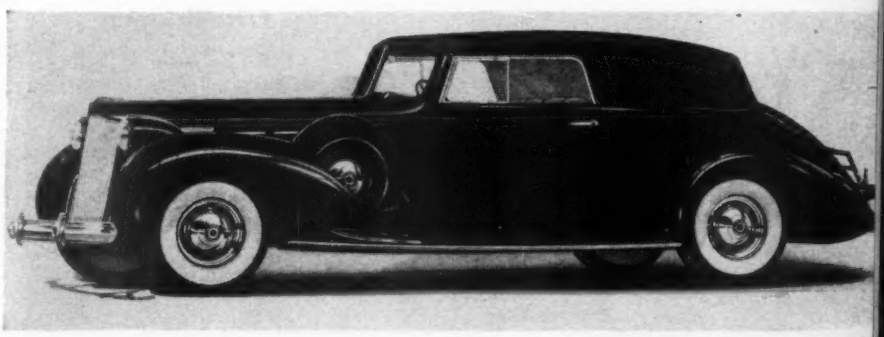
The gear ratio (about 4.5:1) was not designed for flat-out runs on the salt flats, but for effortless cruising at speeds from 0—75 in high gear—higher if it pleased you. In town, the car handled like a modern clutchless car. You could brake down to a snail's crawl in high gear, then throttle out to speed without jerk or chatter. After a full stop, the three tons could be started in high gear but that was rather imposing on good design too much. It was, after all, quite simple to start in low and shift to high immediately. On hills, the Packard Twelve was in its element. Second gear was engaged only when you were racing cable cars up the steepest part of California Street in San Francisco.



THE COUPE, for two or four passengers, is a typical stock '34 Twelve. Identification features are the vertical grille, slightly skirted fenders, low leading edge on front fenders, narrow windshield



THE SPORT PHAETON, for four passengers, an old Packard specialty, ended with this '36 model. Identification features are rakish slant to grille, trunkless rear, low leading edge on front fenders



THE CONVERTIBLE VICTORIA, for five passengers, is representative of the stock '38 Twelve bodies. Identification features are swollen front fenders, V-shaped windshield, high headlights

The bodies that were set on these Twelves were seldom startling. Packard built most of them itself, keeping in mind the boast about the ten-year-old Packard looking new. Even the casual observer can see the strong continuity that flows from 1932 to 1939. Hood, body lines, doors, grille, deck all stayed very nearly the same. Fenders were twice changed radically—once when they were skirted, second when they swelled out to press the side of the hood. Windshields went from straight to slanted to slanted V. Hood louvers changed from vertical doors to horizontal flaps. For those of you who like to be able to identify your years, look at the three illustrations above.

In general, there are three distinctive body styles that cover the eight years of Twelve production. '32, '33, and '34 belong in the same classification. The grille was a broad, nearly-flat V set absolutely vertical. Between '32 and '33, the fenders grew demure skirts and the windshield slanted backward at the top ever so slightly; between '33 and '34, the front fenders were brought forward until their leading edges almost touched the front bumper. An additional identification feature is in the dash panel. The '33 and the '34 are very similar, but the later model leaves a space for the Packard radio in the top center of the panel—the '33 groups the dials so that no space is available in that position. This particular instrument board is

(*Continued on page fifty-four*)

MAN BEATS JEEP...and the Jeep comes back for more

By Eric Rickman

NOTE: Since we bought our Jeep, 11,000 miles ago, we've been questioned by scores of MOTOR TREND *readers about the ruggedness, the versatility of the civilian FWD Jeep and how it compares with the military model. We don't plan to add Motor Trials of utility vehicles to our format, and this is not a Motor Trial; it's one man's impression of one of the world's most useful cars.—Editor.*

I'VE RACKED UP almost half of the 11,000 miles on the odometer of Trend Inc.'s Jeep station wagon. After the first 500 miles I'd learned to respect that car mightily. The strongest feeling you get from extended experience with a Jeep is confidence. The way we've flogged that little car and the way it's taken the beating without ever missing a beat leaves me with the conviction that I could circle the world in the car at any time, with or without benefit of roads!

Our Jeep was bought as a beast of burden that could carry heavy loads of equipment anywhere; that could, for example, take us to road races and, once on the spot, carry us to places across the usually trackless wastes of the circuit's infield. Two installments of the Palm Springs road race proved to me that deep desert sand isn't an obstacle for four wheel drive. Pebble Beach was just as rugged and had hills thrown in to boot!

Going to and from Pebble Beach, Borgeson and van Osten held their Ford Consul right around a steady 70 mph on California's deserted Highway One. The Consul amazed everyone with its roadability, which is certainly exceptional. There were no blue ribbons for the Jeep, but I noticed that the Jeep stayed with

WITH FOUR-WHEEL drive engaged, Jeep can cross terrain forbidden to any car possessing only two driving wheels. Mud or sand, two deadly traps for most cars, don't stop the Jeep

the lively foreign iron all the way.

Don't get me wrong now—the Jeep is no demon on the highway. Ours has the little four-cyl., F-head engine (bhp per cu. in. ratio is up with the best American cars). It is versatile and flexible thanks to a really fine range of gears, but high top speed was deliberately sacrificed to power in the blueprint. In mudflats and sandtraps, the gears will multiply that power until you'll swear you're driving a Cletrac bulldozer. The all-time proof of the four-wheel-drive Jeep's ability to climb anything on which its wheels can get traction came when Borgeson slapped me with, "Let's take the little pack-mule to Baldwin Hills!" His foul plot was to push the Jeep up one of the steepest and longest motorcycle hillclimb courses in the state. We went to the base of the hill, dropped into compound low and chewed half-way up the 60-degree slope. There I stopped, set the brake, killed the engine, re-started. Station wagon body and all, we went into forward motion without a hitch. On the steepest section, one man could have turned the car over by breathing hard under the front bumper, but the Jeep behaved like it was riding on suction cups.

The four-wheel-drive feature is optional, but if you live in the country or if you like to use your car for hunting and fishing, you should have it. Engaged or not, these extra gears whine like hungry dogs, but that's just part of the Jeep's winning personality. Too, there's friction loss even when you don't have the front drive engaged—the front axles are positively coupled to the wheels and when these wheels move, all the front drive train moves. But there's a way out of this. Clary Jeep hubs are on the market and, installed in place of the stock hubs, they cut the front wheels loose from the entire front drive system, up your gas mileage and performance. They can be installed or removed in less than five minutes and are, I think, required accessories for the well-equipped Jeep.

I've had to cover some far-flung assignments and my wife has gone on many of them. A serious accident left her spine extremely sensitive to a poor seating position, and most modern passenger cars cripple her in less than a half-day drive. Not the Jeep—she can cruise all day without fatigue. The passenger seat is firm and straight; leg room is more than adequate; springs and shock absorbers are beautifully matched. There is no seasick pitching or rolling.

A feature that I just can't get used to is the Jeep's steering. I'm not exaggerating in the least when I say that you can storm over the most pitted chuck hole roads while steering with the light touch of two fingers—most of the time with no hands, if you want to show off. The car just about steers itself and I don't know of another present-day production job that can make that claim. Try it if you doubt!

Another amazing Jeep feature is payload space. You can carry six people without strain on the two wide seats. Seven will fit in a pinch. We've actually loaded another seven on tailgate, front fenders and hood for short hauls. And still there's room in the rear for astonishing amounts of luggage. The Trend Jeep, when hitting the road on away-from-home coverage, carries a couple of hundred pounds of photo equipment, the staff's luggage, a big box of tools, at least a case of soft drinks and a cooler, plus the dress clothes of the personnel involved. We have plans for a top luggage rack and camera platform. The car has buzzed along for its entire life under this sort of exploitation and the engine—*never touched*—runs better than it did when new.

One of the Jeep's jobs was that of towing the Goldie-Gardner MG, mounted on a heavy iron trailer, from San Francisco to Los Angeles. This test proved two things: ability to handle a heavy load over a long period of time (at 50 mph average) and the reliability of the

(*Continued on page fifty-six*)

CLARY HUB and stock hub, left and right. While the stock hub has splines to engage front live axles, Clary hub has ball race which permits front axles to run free, cuts out front drive train at times when front wheel drive is not required

Photos by Tom Medley

JEEP CHEWED its way up 30-degree motorcycle hill-climb course in FWD compound low without a trace of effort. Rick stopped the car half way up, set hand brake and it held! He restarted, completed the fierce 300-yard climb smoothly

Spotlight on Detroit

(*Continued from page ten*)

gear speeds for driving under ordinary country conditions and in light city traffic. The other range has three gear speeds for driving in congested areas and hilly or mountainous territory.

With the new drive Pontiac's rear axle ratio is the highest in the industry—3.08:1, with engine revolutions per mile reduced about 15 per cent over the former Hydra-Matic and 21 per cent below standard transmissions.

When the 1-2-3 range is in operation the driver is provided with a 4.46:1 final drive ratio. One notable feature of this new transmission is the fact that the control lever on the steering column may be moved from one range to the other at any moderate car speed on paved, dry roads.

Along with the new Hydra-Matic, Pontiac has stepped up compression ratio to 7.7:1. The six-cyl. engine now records 102 bhp at 3400, and the eight-cyl. engine puts out 122 bhp at 3600 rpm.

Chrysler Virtually Unchanged

Refinements contributing to performance, appearance, safety, economy and comfort keynote the 1952 Chrysler line of cars.

All models except the Windsor series are powered by the exceptional 180 bhp V-8 engine. The Windsor features a six-cyl. plant with bhp stepped up to 119 at 3600 rpm. Stroke has been increased from 4½ to 4¾, giving an increase in displacement from 250.6 to 264.5 cu. ins. Compression ratio remains at 7:1. An important advancement for the Windsor series is the availability at extra cost of Hydra-Guide power steering. Other optional devices in all Chrysler lines are electric window lifts, and tinted glass for windows. Important exterior appearance changes result from the use of new wheel covers and a restyled tail light. The latter incorporates back up lights, thus eliminating the separate units used last year.

AS WE GO to press, the only photo of Chrysler's '52 line to be released is that of the New Yorker shown here. Changes from '51 appearance are quite moderate, consist mainly of relocated chrome

KF Adds One and Drops One

The decision by KF to merchandise a passenger car through the Sears, Roebuck store chain is evoking considerable interest in automotive circles. Named the "Allstate," the new car will be a modified version of the Henry J. It should be on sale in 17 cities in the south and southwest by the time MOTOR TREND reaches you.

Carried to its logical conclusion, this move may make it possible for Sears customers at some future date to order cars by mail. Simultaneously, KF has discontinued production of the Frazer, its luxury series. Replacement parts will continue to be available for the line, however.

Ford and GM Tips

Although neither Ford nor General Motors will introduce complete lines until the end of February, facts and rumors about their offerings are circulating hot and heavy in the Motor City.

Among those considered to be reasonably accurate are these. Ford, Mercury and Lincoln will each bring out new body styles. Both the Ford Six and Lincoln will present entirely new engines. The proposed new eight-cyl. power plants for both Ford and Mercury have been shelved due to the national defense program.

Cadillac is back in the rumor news with indications that it will feature dual exhausts and new manifolding. Other improvements are said to be a new carburetion set up and improved GM Hydra-Matic transmission.

It all adds up to an attempt by the GM division to recapture the bhp and top speed laurels from Chrysler as added sales and prestige points. Cadillac's body, although essentially the same shell, has been reworked to give it a new look.

Oldsmobile also is expected to announce engine changes designed to keep it on top of the new Dodge and De Soto V-8's. Both cars, plus Buick, are believed to be introducing power steering as optional equipment, and there is a possibility of power braking being available too.

Car Shortage Predicted in '52

Even though the auto industry built more than 6,000,000 vehicles in 1951, for the second highest production year in history, various officials in the Detroit area continue to predict severe shortages in the months ahead.

Latest to point a warning finger is Harry J. Klinger, vice president in charge of car divisions for General Motors. He attributes it to governmental restrictions and a severely short inventory of cars in dealers' hands. Mr. Klinger expects the shortage to last throughout the year. The auto industry generally feels that there is hardly any chance of meeting manufacturing quotas imposed by the government on car makers during the first quarter of 1952.

Engines to Ping

Another casualty of the National Defense Program is the quiet engine. From now on you may expect your car to knock on hills and during rapid acceleration. The condition is being brought about by the reduction of antiknock octane ratings in gasolines to make more tetraethyl lead available for the manufacture of aviation fuels. You may reduce knocking, though, by retarding the spark and cleaning up your engine.

—Harry Cushing

PONTIAC'S "super de luxe Catalina" is a smart, tidy modification based on the '51 dies. Biggest change is in high-speed rear end, dual range Hydra-Matic. Compression ratio has been upped again

XP-300 by Charles Chayne

(*Continued from page twenty-one*)

of GM, who was then general manager of Buick, and he approved the project.

It was agreed that Mr. Earl would be responsible for the styling of Le Sabre and the XP-300 would be in line with the writer's thinking. It was also agreed that the writer would be responsible for the design of the mechanical parts of the cars and that we would go as far off the beaten path mechanically as we planned to go style-wise.

Wherever it seemed best the same components were used in both cars—when this was done the car having the most severe restrictions dictated the design of that part. The engine is a good example of this. Le Sabre was styled with a very short engine compartment—so short in fact that nothing but a V8 engine would fit into the space and give the desired power.

The general appearance of both cars was the result of a decision to build them just as low as possible. The stylists always want to build cars very low and never seem to understand that underneath the body must be certain things that make the car go and stop. This time I told Mr. Earl we would let him put the people in the car just as low as he wanted and we would put the "works" in the front and rear. Doing this pretty well forced the cars into being two-passenger convertibles, since with the necessary mechanical parts ahead of and behind the passenger space we would have been forced into an excessively long wheelbase had we attempted to use a second seat. I hope that the above will explain why these are convertibles and definitely not "sports cars" in the sense that term is used today.

One of the ground rules in the program was that the cars must be "complete" in every sense of the word and still be capable of really terrific performance. Heretofore, all high-performance cars were compromised as regards passenger space, ride, and, many times, handling. In fact so common has been this practice that many people whom one would expect to know better have taken it for granted that hard steering, hard ride and cramped seats are all very necessary attributes of a high-performance car.

I am sure it will surprise these folks to find that we have in the XP-300 the most comfortable seats ever put into an automobile. They are adjustable both fore-and-aft and vertically and there is a very clever little arrangement that stiffens or softens the seat back at the belt line. I call it "clever" because it has been a pet idea of mine and experience with it in other cars has been most pleasing. It is surprising how, after a long drive, a little change in the seat back at this point makes you feel as if you were just starting out.

(*Continued on page sixty-one*)

SPORTING SCENE . . .

- Palm Springs Road Race
- Mexican Road Race
- MG Car Club—Convair
- Mt. Equinox Hill Climb
- Arrowhead F.C.C. Meet

By Jim Potter

WINNER OF Palm Springs Road Race was Don Parkinson, flanked by Mrs. George Carey, Ralph de Palma, Mrs. Parkinson in background. Parkinson drove the same XK wrecked in last spring's installment of the race

PALM SPRINGS was literally swarming with sports cars on the weekend of October 27th and 28th when the California Sports Car club held a spectacular Concours D'Elegance at the famous Racquet Club and a road race on the deserted streets of an Army Air Force base.

In the first event of 10 laps, although not qualified to compete in the 0 to 1500 cc stock class, an amazing one-cylinder Cooper driven by Russ Kelly out-performed the 14 entrants by as much as a half lap in the six times he circled the 2.3-mile course. Powered by a J.A.P. engine, the Formula 3 car put on a good exhibition—fast on acceleration and amazingly smooth on the corners, a vehicle to watch when it has a chance to compete.

Bill Kerrigan in his Singer 1500 led the rest of the field for all 10 laps. An MG driven by Bob Menefee came in second, followed by Bill Quinn in another Singer for third place.

The second event was for production cars rated at 1501 to 8000 cc. Six XK 120s and a Muntz Jet entered the race. However, the Muntz, driven by Fred Lovell, dropped out of the race after four laps because of brake troubles. An XK driven by Sherwood Johnston maneuvered into first s_ot in the second lap and was never passed. Dick Jackson held second place throughout the 10 laps, and John Barrows came in third. Jackson took the fastest lap time of the race 2:31.1.

The main events, the Desert Trophy and the Palm Springs Cup, were run simultaneously. The former was a 45-lap (103.5 miles) event for 1500 cc unsupercharged, and under cars, the latter was a 65-lap (149.5 miles) for sports cars up to 8000 cc. The 32 entrants in the two events lined up in pairs at the starting line. Besides the usual Jaguar XK-120s and MGs, there were a Seifried Special, a Simca Special, a Mercury Special, a Crosley, a Morris Minor, a Cad-Allard, and a Nash Healey. The line-up was spectacular, but the race itself, because of the lack of a running commentary from the loudspeakers, seemed to drag for the spectators despite the speed of the cars on the circuit.

Excitement in the race was provided by Carle Conway, who took the corners a little too fast in his Nash Healey and overturned in the second lap. Other hardluck drivers included Mike Graham in a Cad-Allard which snapped a rear axle in the eighth lap. He had been leading the field until this event retired him. Don Parkinson in his XK took over the lead position and was never threatened for the rest of the race.

PALM SPRINGS ROAD RACE

October 28, 1951

Event No. 1 (0-1500 cc stock)
(10 Laps—23 Miles)

1. Bill Kerrigan (1500 Singer), 2. Bob Menefee (MG-TC), 3. Bill Quinn (1500 Singer). Winner's time 28.06.4—43.2 mph

Event No. 2 (1501-8000 cc stock)
(10 Laps—23 Miles)

1. Sherwood Johnston (XK-120), 2. Richard Jackson (XK-120), 3. John Barrows (XK-120). Winner's time 25:38.5—54.8 mph

Event No. 3 (Desert Trophy)
(43 Laps—103.5 Miles)

1. Roger Barlow (Simca), 2. John von Nuemann (MG-TD), 3. Ronald MacDougall (MG-TD), 4. John Biehl (MG-TD Mk II), 5. Sidney Ingham (MG-TD). Winner's time 1 hr 55:47—54.0 mph

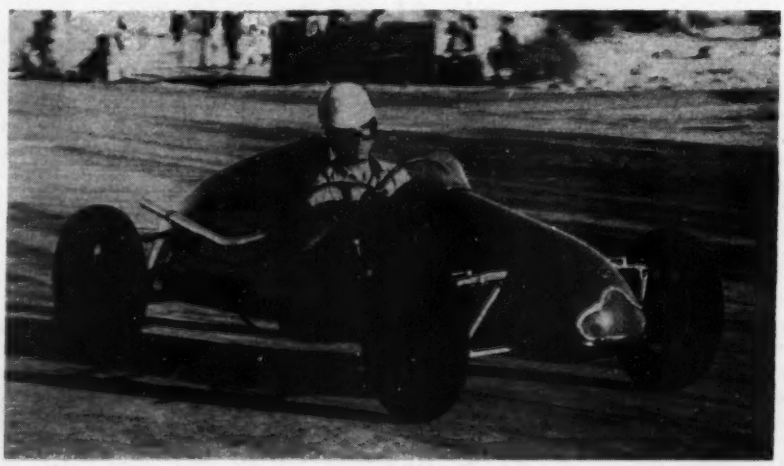
Event No. 4 (Palm Springs Cup)
(65 Laps—149.5 Miles)

1. Don Parkinson (Jaguar Special), 2. Bill Stroppe MG-TC V-8 60, 3. Phil Hill (XK-120 Modified), 4. Hastings Harcourt (XK-120), 5. Bob Path (Seifried Special). Winner's time 2 hrs 43:3.2—55 mph

MEXICAN ROAD RACE

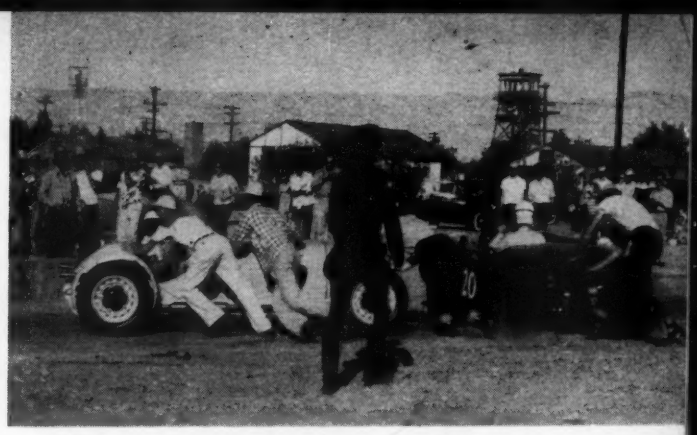
TWO VETERAN Italian drivers and one American provided a 1-2-3 finish for the grueling border-to-border Mexican Road Race before 50,000 spectators at the Juarez Airport on November 25th. White-haired Piero Taruffi of Rome drove his low-slung Ferrari to win the race at a record-setting average speed of 87.6 mph for the 1933 miles. For the last 230 miles from Chihuahua City, he averaged better than 106 mph and captured $23,180, top share of a $68,380 prize melon.

A split second behind was Italian Champion Alberto Ascari from Milan, like Ta-



RUSS KELLY of San Francisco drove six demonstration laps in Bill Breeze's Cooper, blew off the field of stock 1500 cc sports cars. Kelly's excellent control of the 500 cc car is largely due to his years of amateur experience in the handling of ultra-high-performance motorcycles

ROGER BARLOW, winner of the 103.5-mile Desert Trophy Race, then winner of his class in the 149.5-mile Palm Springs Cup Race, shares honors with team mechanic Bill Pringle, pit crew member Louise Barlow



DRAMATIC MOMENTS like this were plentiful at the Palm Springs road race, but there were no driver injuries, no cars seriously damaged except, perhaps, Carle Conway's Nash-Healey, which flipped on 2nd lap

ruffi, driving a Ferrari. Less than 20 feet farther back was American driver Bill Sterling, racing home in a 1951 Chrysler Saratoga. Ascari collected $14,487 and Sterling $11,590. Five other Americans, a Frenchman, and a Mexican were in the prize money.

Total driving time for the winner over the tortuous Mexican roads from the southeastern tip of Mexico was 21 hr. 57:52. Taruffi's average speed of 87.6 mph bettered the mark of 78.421 miles set in 1950 on a 2178-mile course by Hershel McGriff of Portland, Ore., and his 106-mph speed in the Chihuahua City-Juarez lap compared with the previous record of 100.425 for the stretch. That lap record was set last year by Sterling. For pictures and complete report on this spectacular event, see the March issue of MOTOR TREND.

Official elapsed times:

1—Piero Taruffi, Rome, Italy, Ferrari, 21h. 57m. 52s.

2—Alberto Ascari, Milan, Italy, Ferrari, 22h. 5m. 56s.

3—Bill Sterling, El Paso, Tex., Chrysler, 22h. 13m. 46s.

4—Troy Ruttman, Lynwood, Cal., Mercury, 22h. 18m. 3s.

5—Jean Trevoux, Paris, France, Packard, 22h. 22m. 17s.

6—Marshall Teague, Daytona Beach, Fla., Hudson, 22h. 41m. 40s.

7—A. C. Rogers, Colorado Springs, Colo., Cadillac, 22h. 52m. 43s.

8—Ray Crawford, Alhambra, Cal., Lincoln, 23h. 4m. 6s.

9—Jose A. Solana, Mexico City, Oldsmobile, 23h. 12m. 29s.

10—Robert S. Korf, Colorado Springs, Colo., Nash, 23h. 12m. 49s.

11—Clyde E. Johnson, Tuscola, Tex., Chrysler, 23h. 20m. 31s.

12—Raymundo Corona, Mexico City, Packard 23h. 26m. 3s.

13—Owen Gray, Lubbock, Tex., Oldsmobile, 23h. 35m. 1s.

14—Douglas Ehlinger, Puebla, Mex., Packard, 23h. 36m. 47s.

15—Leon C. McMillan, Lubbock, Tex., Oldsmobile, 23h. 47m. 42s.

16—Tony Bettenhausen, Tinley Park, Ill., Chrysler, 23h. 49m. 49s.

17—Luis L. Solares, Mexico City, Hudson, 24h. 2m. 2s.

18—Olegario P. Pliego, Mexico City, Oldsmobile, 24h. 6m 39s.

19—David Dominguez Gama, Juarez, Chrysler, 24h. 12m. 1s.

20—Floyd Trimble, Portland, Ore., Oldsmobile, 24h. 15m. 40s.

MG CAR CLUB—CONVAIR

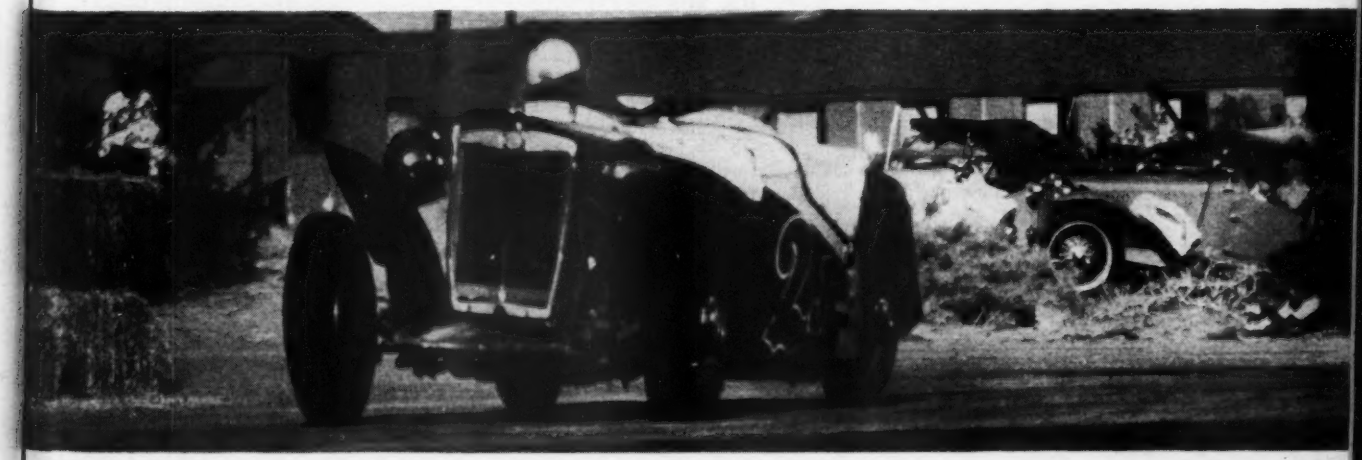
THE MG CAR CLUB'S first major racing event at Convair airfield, Allentown, Pennsylvania, provided the drivers with a real challenge on the L-shaped course. The circuit featured nine corners in its 1.58-mile lap, including a hairpin that called for a U-turn no wider than a six-lane avenue. The spiked concrete surface was murder on tires; however, the weather was bright and cool and the participants as well as the spectators enjoyed the event.

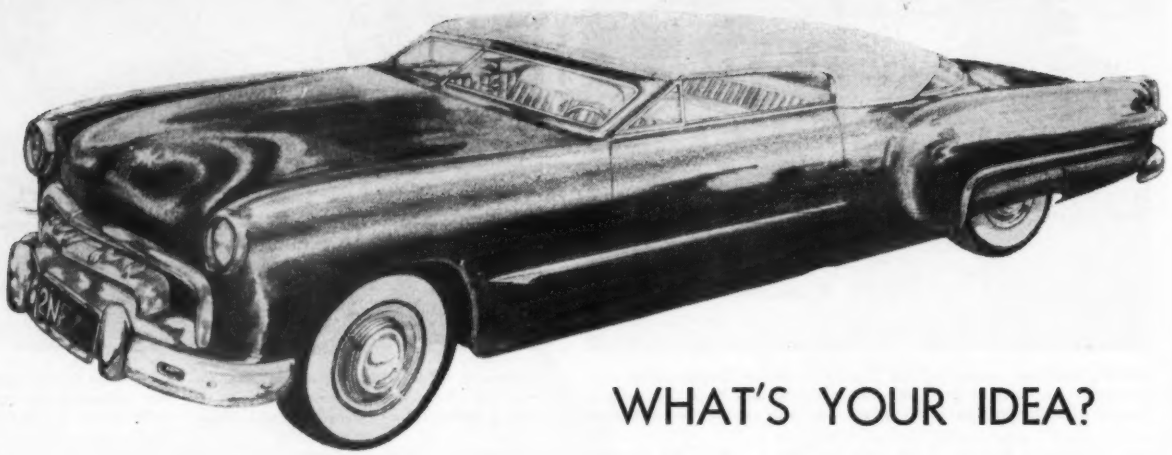
Opening race, the Convair Trophy, was for the long-neglected women drivers. The 10-lap scratch race brought five starters, all MG TDs. Anese Ash turned in the fastest lap of the race first time around, clocking 1:48—better than a lot of males. Martha Coler passed, however, taking first place. Nancy Ehrman came in 28 secs. later for second spot with Anese following for third.

The second event, a 20-lap race for unmodified MGs, drew 10 starters. This event fulfilled a need long felt by enthusiasts

(*Continued on page fifty-seven*)

BLOODY BUT UNBOWED: Bill Stroppe "lost it" in one of Palm Springs' turns, was carried a couple of hundred yards out into the sand dunes. A moment's hesitation and he would have been stranded but, bounding like a jackrabbit, he hurled 2 Jr. from dune to dune, regained the course with some damage to car but little loss of time. He drove a fine, hard race, placed second





WHAT'S YOUR IDEA?

NOTE: Want your choice of any ten available back issues of MOTOR TREND, *free? Just send in your little-known idea which other motorists might be able to put to use. The idea can apply to any class of car: stock, custom, veteran, antique, or classic. Upon acceptance of your idea, you will be sent a check list of available back issues, from which you can make your selection.*

We will do our best to verify the correctness of the ideas which appear on this page, but can accept no responsibility for possible misstatements by readers.

RADIO DRAIN

Many radios are wired through the switch and to use the radio while engine is not on, the switch must be on. It isn't so much the radio that runs down the battery as it is the coil being energized. Cut switch on and radio off, watch the ammeter and just touch starter button or foot pedal enough ~~till ammeter~~ swings back to center. Then points are open and coil is not energized. Cut radio on and you will notice battery discharge on ammeter is much less. Of course if radio is left on for long periods, battery will be run down.

T. R. Bowerman,
Tuscaloosa, Ala.

DECOKE AND ROAD SHOCK

To eliminate hard carbon on top of pistons, remove air cleaner and pour water slowly into carburetor throat while motor is idling about 700 rpms; oxygen in the water will cause carbon to burn.

To eliminate road shock in steering on Chrysler Eights, remove king pin needle bearings, replace with floating bushings.

W. Miller,
Dallas, Texas.

ICY WINDSHIELDS

During the winter in this section of the country, we have very little snow, but we have a heavy frost almost every night. This is very inconvenient for car owners who have no garage. Every morning you must spend five freezing minutes thawing out your windshield.

To remedy this find a discarded plastic shower curtain, spread it across the windshield, and close both of the front doors over the ends of it to hold it in place. This keeps frost from ever getting on the windshield and the material is thin, letting the doors close tightly over it.

When not in use, the shower curtain can be rolled up into a small bundle and stored under the front seat or in the trunk.

E. Powell,
Columbia, S. C.

MAD CAD

[Below] find a drawing of a Cadillac *de ville*. (My idea, that is!) I won't tell you what has been changed because everything has been.

Paul Haverly,
Fergus Falls, Minn.

ICE BOX DISCOVERY

Owners of '51 Kaisers might be interested in knowing that by removing the spare tire from the tire well they can have an ice box. This is done by drilling a small hole in the bottom of the tire well and filling it with ice. The hole is for leakage from the melting ice. This will serve as an ice box for picnics or for fishermen who want to keep the fish fresh and for many other useful things.

R. Jensen,
Detroit, Mich.

UNIFORM KNOBS

Many car owners might find it practical to have their car key look just like the other knobs on their dash. This can easily be done by getting a metal dash knob, sawing it in about ¾ of the way from the dash side, cut the sides from the back of the key, slip the sawed end of key in the saw cut, solder in place, file edges smooth.

W. Bischoff,
Salem, Oregon.

BUMPERS FOR CUSTOMS

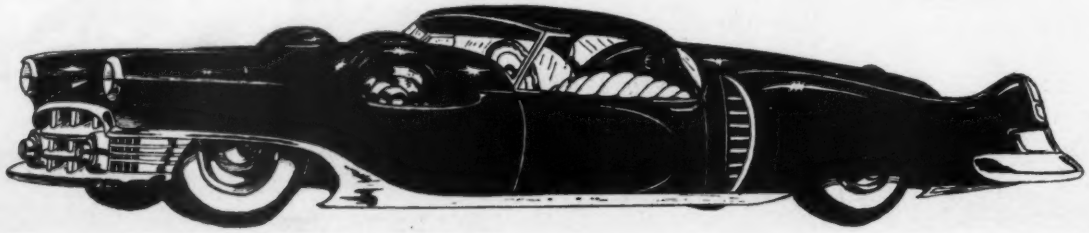
Why don't custom car builders who install tail lights in their rear bumper guards ease the task by using the bumper guards from a '50 or '51 Buick? The only change would be the removal of the present white lens used in the back up lights and the installation of red lens to be used for tail lights.

M. Markley,
Freeport, Ill.

TOP PAGE DRAWING

". . . I have noticed your page for us, the readers, to add our ideas in customizing automobiles, so I thought I'd send this sketch I made. The car is a '49, '50, or '51 Ford convertible with '51 Packard rear fenders, '51 Lincoln grille (center piece), and of course, the usual California touch—Carson top and lots of lead.

Joe M. Van Hosen SN.
Fleet Air Wing TWO,
c-o Fleet Post Office,
San Francisco, Calif.



IDEAS... ARE OUR STOCK-IN-TRADE IN MOTOR TREND

. . . and there are thousands of ideas to be found in these custom features, listed by the back issues in which they appeared. Check this list and order the back copies to complete your automotive library—now—while they're still available. To preserve your copies of MOTOR TREND: handsome leatherette binders. Each holds 12 copies, costs only $2.00, postpaid.

CUSTOM CARS	
Buick, 1947	Feb '50
Buick Convertible, 1941	Oct '49
Buick Roadmaster, 1942	Sep '50
Cadillac, 1946	Apr '50
Cadillac, 1948	Oct '50
Chevrolet, 1940	Sep '50
Chevrolet, 1949	Nov '50
Chevrolet, 1949	Dec '50
Chevy Customs	May '50
Crosley, 1948	Oct '50
Ford Coupe, 1938	Dec '49
Ford Custom, 1940	May '50
Ford Club Coupe, 1941	Sep '49
Ford Convertible, 1941	Dec '49
Ford, 1941	Jul '50
Ford, 1949	Nov '50
Makela WOW	Aug '50
MG-V8-60	May '50
Mercury, 1940	Oct '50
Mercury, 1940	Nov '50
Merc-A-Baker	Dec '50
Oldsmobile 88	Dec '50
Pontiac Sedan, 1941	Nov '49
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"Sportsman" Body	Jan '50
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Cadillac Station Wagon	Dec.
Chevrolet, '49, C. Abajain	Jan.
Custom Interiors	July
Ford, '42, Hank Griffith's Coupe	Oct.
Ford, '42, Hawaiian Special	Nov.
Ford, '50, Britton's Beauty	June
Ford, '41, R. L. Trammel	Aug.
Ford, '41, Zoro	July
Mercury, Barris	Dec.
Mercury, '48, C. Rackahm	April
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Stan Davidson Special	Nov.
Studebaker, '47	Oct.
Willys Jeepster, '49	Sept.

1949: ☐ Oct. ☐ Nov. ☐ Dec.

1950: ☐ Jan. ☐ Feb. ☐ Mar. ☐ Apr. ☐ May ☐ June ☐ July ☐ Aug. ☐ Sept. ☐ Oct. ☐ Nov. ☐ Dec.

1951: ☐ Jan. ☐ Feb. ☐ Mar. ☐ Apr. ☐ May ☐ June ☐ July ☐ Aug. ☐ Sept. ☐ Oct. ☐ Nov. ☐ Dec. ☐ Jan.-'52

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XP-300's Engine

(*Continued from page twenty-two*)

second, for the purpose of meeting and attempting to solve the problem of oil control with that number of rings. Remember, this is primarily an experimental engine.

Many readers will note the method of locking the wrist pin by means of a cap screw through a slotted connecting rod. This is a stock Buick feature which has been successful and trouble-free.

Naturally, the shorter the stroke of the piston, the shorter the throw of the crankshaft will be. The XP's stroke is extremely short and the crankshaft bearings are large. Therefore, the individual journals overlap each other considerably, making for a shaft of great rigidity. This is an undeniable virtue, but it should not be over-emphasized. Many successful engines have had extremely flexible crankshafts. The key reason for the XP's compact crankshaft is just that: compactness. If lower-end stiffness had been all-important, aluminum would never have been used for the crankcase.

The XP's cylinder heads are also made of aluminum, valve seats are stainless steel inserts. There is no water jacketing around the lower side of the exhaust valve stem since Buick engineers believe that adequately-jacketed valve seats, coupled with sodium-filled, hollow valves, will take care of exhaust valve cooling.

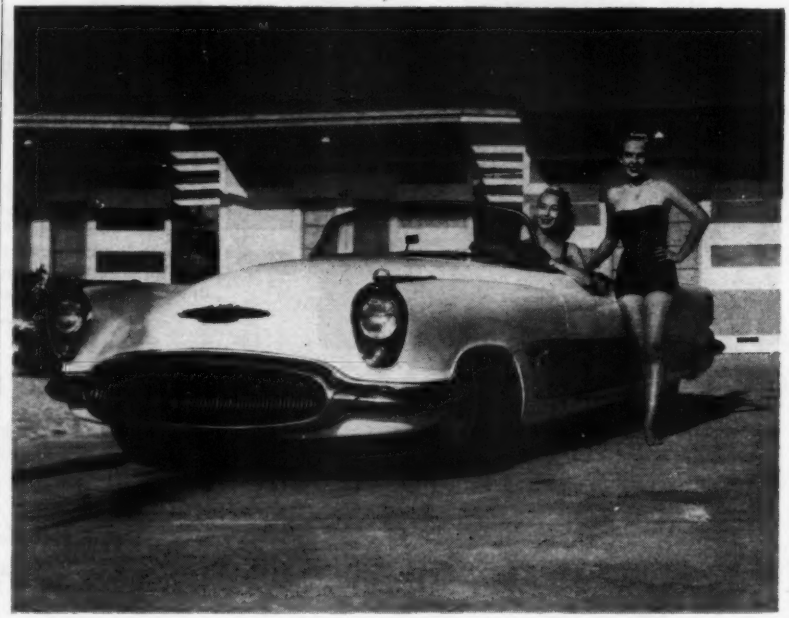
You may be wondering, "why, when building such an advanced engine, didn't GM go the whole way and incorporate dual overhead camshafts?" For one thing, oh cams would have added to the width of the engine, detracting from the desired compactness. Then, too, there were economic considerations. While GM was obviously not trying to pinch pennies when the XP-300 was designed, its eye was definitely on possible production-line applications. Overhead camshafts are expensive details. The idea was to achieve maximum output by the simplest, most inexpensive means.

You'll notice that nested valve springs are used—the springs are double, one inside the other. This is not a new idea by any means, but it's not common in production car practice. Reason for the double springs is this: one spring will have a more severe "surge" or "float" period than will two springs which exert an equal tension. While the two springs will have their own surge periods, each will be small and will occur at a different point in the rpm range than will the surge period of the other spring.

The XP's extremely short rocker arms are notable: they hold reciprocating weight down, contribute to the efficient functioning of the valve train even at very high rpm. The pushrods, too, are short and light. As for valve lifters, both hydraulic and mechanical types are being experimented with. Note the excellent isolation of the spark plugs by partitions cast in the aluminum rocker covers, keeping plugs clean and dry.

A nice illustration of space saving to the nth degree is offered by the XP's rocker arm layout. While the intake rockers are mounted transversely on the engine, the exhaust rockers point fore and aft. This unusual arrangement was a diffi-

(*Continued on page sixty-one*)



BEAUTIFUL BODIES glamorize any product; XP's sharp shell is the glamor package that is making public conscious of important research activity being carried on by world's largest auto producer

Color on Your Car

(*Continued from page twenty-nine*)

today these artisans are as scarce as Stanley Steamers. Only one is known to exist in all motor-minded Southern California and he's booked up solid for months ahead by members of the Horseless Carriage Club.

Let's take a quick look at the various classes of automobiles on the road today and see what color can do for them.

Detroit Stock Cars

In general, motorists in the East and Middle West prefer darker colors while in the West and South they choose lighter shades. In recent years, however, the grays, beiges and tans have surged ahead in all parts of the country because they require less washing and dusting.

The research departments of Detroit's automobile factories have done much experimentation with color—as have the sales departments. Year by year the choice of colors is widening. The Henry Kaiser lines, for example, have done much to stimulate the use of new and unusual colors. If you want a repaint job—as more and more motorists do—you should consider it as an "extra" like a radio or heater. It is simply a luxury.

Radical Custom Jobs

The chop and channel car with its sweeping lines and absence of chrome allows you to use almost any color you like —even black. The so-called "shocking" colors—such as bright purple, chartreuse or pastel pinks and greens—would look repulsive on other types of cars but give a radical custom job a beauty all its own. One motion picture executive in Hollywood, for example, has his modified Buick painted a milky lavender and it's one of the most distinctive jobs on the highway.

Gook Wagons

If you're the type of motorist with the urge to hang musical horns, air scoops, aerials and rear window wipers on your car, then you'd better stick to blacks, dark greens or dark blues. Dark colors will make your car shorter and fussier and provide a background for your ornaments like a piece of black velvet in a jeweler's window sets off a necklace or brooch.

Sport Customs

This is a custom-made automobile (usually American) built to look like a sports car. Your best bet here is to stick to lighter, warmer colors—creams, light blues, yellows and tans.

Sports Cars

Most sports cars are foreign made and tend to be shorter than the average American-built automobile. The main problem in painting is to give them length. Take an MG for example. You could paint all the horizontal surfaces (hood, gas tank and fenders) a metallic green, and the vertical surfaces (sides and under the fenders) a pale yellow. This color combination accents the fender line sweep and produces a longer, lower effect than most people think possible in an MG.

Classic Cars

These are the Duesenbergs, the older Packards and the Chrysler Imperials of early 1930 vintage. As a rule, chrome wasn't stressed, but tremendous hoods were—some of them were seven feet in length. Fenders were long, sweeping things, and some of the doors were cut down. These jobs look good in creams, yellows and even light, tomato reds.

In general there are two basic types of paint for automobiles—lacquer and enamel. Lacquer has been used for more than a quarter of a century where depth and richness of gloss is desired. Synthetic enamel is newer, easier to apply and less expensive because no sanding or rubbing is needed. Both are about the same in the matter of durability. You can stir up quite an argument between the enamel-fanciers and the lacquer-lovers. But the fact remains that your better paint jobs are all lacquer.

Depth of lacquer depends on the method of application and the trade secrets of the custom painters are as jealously guarded as the secrets of the A-bomb. The basis of good lacquer painting, however, is to keep your material wet. Each coat is blended with the one previously applied so that the final result is like one heavy coat of paint.

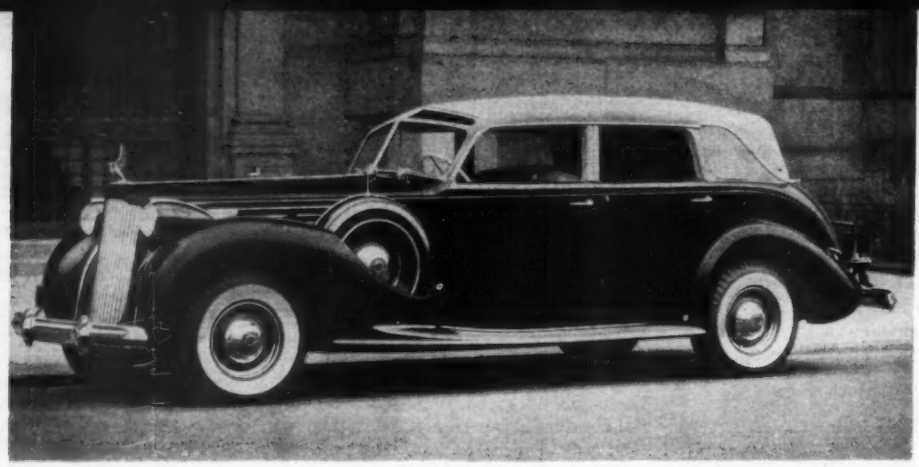
Specially-mixed colors in custom painting can sometimes achieve unique and startling effects. You can mix a blue that will look almost turquoise-green on the highlight of the fender curve, seem a rich, cobalt blue on the side panel, and resemble deep purple on the lower surfaces. It's similar to the iridescent effect you sometimes see on the lining of men's suits.

One of the secrets of good color—especially richness of tone—is getting a good base coat. This again is one of those closely-guarded secrets of the trade, but in general the base coat will be a dark color. One of the best-known custom automobile painters in the business, as a matter of fact, uses a dead black and achieves very deep, rich-looking tones.

In addition to the regular lacquers and enamels, there are variations called metallics which are growing in popularity. These are ground aluminum powders suspended in paint. They're more expensive to buy and more expensive to apply. You've got to work them as wet as possible and "fog them in." Otherwise they tend to run or to produce a spotty effect. I've seen some poorly-done metallic jobs where you could rub off the metal powder with your finger. In general, a metallic paint job will cost about 20 per cent more than a plain-color coating.

Automobile painters are often asked the question: "why couldn't I buy some enam-

(*Continued on page fifty-eight*)



THE TOURING CABRIOLET, a Brunn masterpiece, is built on a '38 chassis

The Packard Twelve

(*Continued from page forty-three*)

probably the most attractive Packard panel ever made and is considered to be second only to the '36 and '37 Cord panel in appearance.

Now Packard was ready for what might be called a major change. '35, '36 and '37 models form another group of almost exactly similar body styles, but the difference between '34 and '35 is pronounced. The grille went from its vertical position into a conservative five degree slope. Front fenders were brought *below* the front bumper line; the windshield was lengthened three inches between cowl and top; the tread was widened; seats were widened *one inch*. The passenger-compartment ventilator was removed from the side and placed in the top of the cowl. Inside, the dash panel had been altered completely. The mad array of aircraft dials gave way to a sedate strip of four large instruments. Even the engine saw a few refinements. Stroke was lengthened from four to four and one-quarter inches, giving a new reading of 175 bhp rather than the old 160. The piston heads were reinforced and a new, copper-lead. steel-backed connecting-rod bearing was developed.

Another of the improvements was a complicated oil cooler that squatted at the right front of the engine. This cooler, after the car had been pounded around for 10 years or so, had the annoying habit of springing a leak. Fortunately the oil circulated with greater pressure than the water, so the result was only a heavy dose of oil in the coolant, but clearing the block and radiator of the creamy oil-water emulsion was and still is a major task.

That same year Packard did a strange thing. During the major change from '34 to '35, some stylist had decided that fender wells should disappear and spare tires should be carried in the deck. All but the convertible sedan and convertible victoria had smooth fender contours. There must have been many indignant objections to this—'36 models appeared with fender-mounted spares for all models. This is not the most important identification change, however. The grille sloped outward at more than twice the '35 angle.

Nothing much of anything happened between '36 and '37. For identification purposes, however, three alterations are important. The '37 cars carried trunks on all models except the coupes and club coupes; the only '36 style with a trunk was the "club" sedan, a five-passenger sedan with two windows on each side. It was this year, too, that Packard gave up the old heavy-end bumpers that also acted as motion dampers, and installed much lighter equipment. Door handles are another point of difference. In '36 the front door opened to catch the wind; by '37 the hinge had been reversed.

With the '38 models, another major change occurred. Front fenders were beefed-up considerably. The spare wheels nestled deeply. Headlights were forced up higher because the front fenders joined the hood at a higher level. For the first time outside the custom models of previous years, the windshield was split.

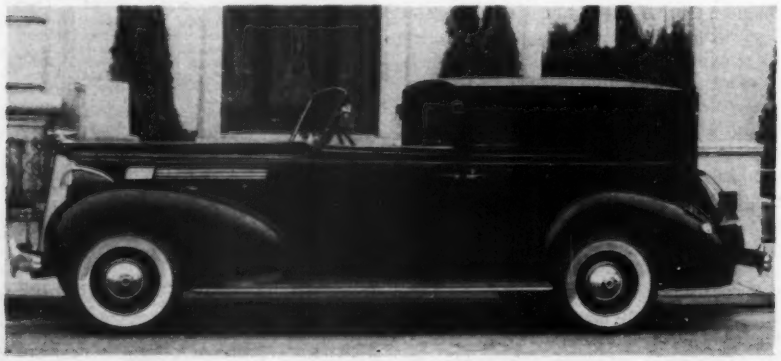
Only one change was made in '39. Alternate bars of the grille were painted, strictly as an identification tag. Otherwise engine, frame and body are same as '38s.

These bodies are strictly stock—but don't look down on factory bodies. In some cases they may be better than the products of custom builders—especially in the case of some of the semi-custom creations. There is a vast difference between the body a customer gets when he takes his chassis into the builder and specifies details, and the body he gets when he buys from the custom catalogue. LeBaron produced some semi-customs for as little as $350, though not for Packard. The price of a body depends to a great deal on the number built at one time. Logically, then, a factory built body will cost much less than a semi-custom of equal quality, which in turn will cost much less than a completely custom job. Extremely high quality is usually restricted to the one-of-a-kind bodies that are built under the customer's watchful eye, while the stock and semi-customs are about the same in workmanship.

Tire sizes changed with other cars of the same period. In 1932, 7.50x18; from 1933 to 1936, 7.50x17; from 1937 to 1939, either 7.50 or 8.25x16. Wheelbase lengths decreased as the years went by and the overhang grew. For the first three years, 142-in. and 147-in. sizes were available. When the new '35 body was developed, the figures shrank to 139 and 144. For the modern era, 134 and 139 were found sufficient.

These minor details are important in that they reflect the changes that took place in all automobiles, classic and otherwise, in the Thirties. In a sense, Packard tried hard to stay traditional in appear-

(*Continued on page sixty*)



THE ALL-WEATHER Panel Prougham, by Rollston, was only built on short, '38 Super 8 chassis

Foundation for the Future

(*Continued from page thirty-two*)

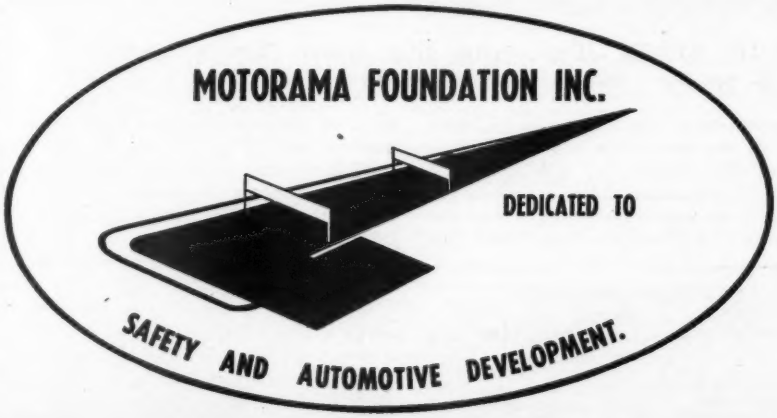
Here is the Foundation picture as we see it: a place where the hot rod youth can meet the year round to hold their trials under formal supervision on a safe strip; a place where the sports car and motorcycle associations can hold their competition events on a well-designed road course that is sporting enough to attract the outstanding competition talent of the world; a place where manufacturers (and private citizens) can prove out their cars, accessories and specialties on a scientific basis; a place which will house research facilities to further the progress of the automotive field; and finally, a place attractive enough and convenient enough to become a great new entertainment theater for all the people of California. The facilities will be available to all responsible groups and individuals who conform to the Foundation code. This code will incorporate all the worthwhile and applicable restrictions and regulations of the outstanding groups in the motor sports field today. such groups as the AAA, AMA, SCTA, Russetta Timing Association. SCCA. and the CSCC. Uses of the facilities will be scheduled on a carefully regulated Foundation calendar to eliminate any conflict of interests. A nominal fee will be charged each competitor or user of the facilities, such fees to be used by the Foundation to maintain and improve the plant and help make it self-supporting. Spectator entrance fees for all sports events as well as concession income (restaurants, parking, programs, souvenirs) will provide additional revenues to be used for the above purposes.

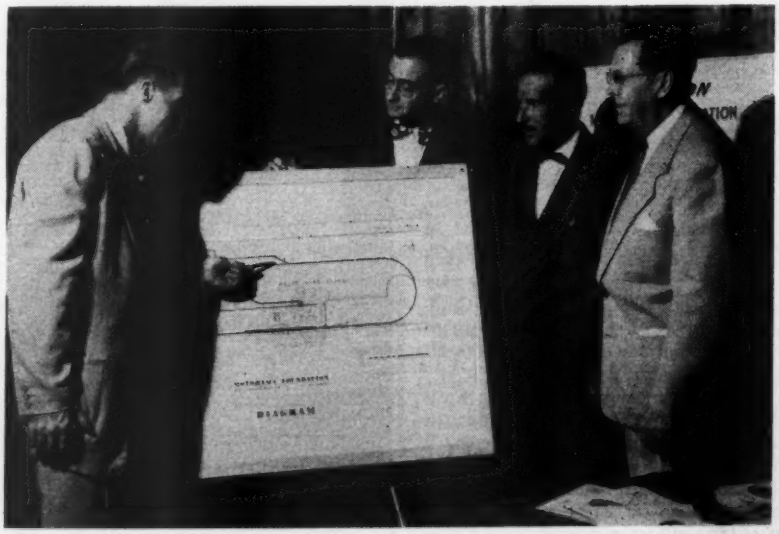
Now that the initial planning has been done, a basic problem remains: one or more major sponsors must be enlisted to underwrite the materialization of the plans, the investment to be guaranteed by the revenues from the operation. And of equal importance to our success is the full and interested support of the general public for Motorama Foundation.

At the recent Motorama show much curiosity and interest were manifest in the visitors to the Foundation booth. One representative of a northern auto dealers' group expressed a desire to "borrow" the Foundation plan *in toto*, for development as a civic project in his state. I assured him that we would be happy to share our experience and ideas with his group to get such a project on the road. We believe that there is no copyright on good works. It is our sincere hope that groups throughout the country will take an interest in the plan and adopt it for their own. Out of such an interest, and the activity which will attend it, will come a major automotive accessory . . . an accessory which will contribute to a better motoring future.

—Rollin Mack

ROLLIN MACK, Nels Nelson, discuss Motorama Foundation road course and timing strip layout with California Highway Patrol motor sport safety team, Chuck Pollard and Ez Ehrhardt





EVERY BRANCH of motorized sport is represented among the Foundation's enthusiastic supporters. Here, with Mack, are Morgan Sinclaire, John Bentley of SCCA, Floyd Clymer, publisher

TREND JEEP hauled Goldie-Gardner record-breaking MG from San Francisco to Los Angeles. In spite of heavy load on rear springs, they never bottomed, even over the severest bumps

MAN BEATS JEEP—and the Jeep comes back for more (*Continued from page forty-five*)

Jeep's brakes. The trailer had no brakes of its own and our car had to be able to slow that mass quickly and dependably. On this particular haul as on every other trip I've made in the Jeep, there was never an indication of brake fade. Also, even with the weight of the Goldie-Gardner car and trailer on our rear axle, the Jeep never bottomed, even when we hit railroad crossings at good speed.

The man who wants to use such a car for regular hauling will be interested in the amount of trouble involved in keeping it clean. When the Jeep needs cleaning I just drop the tailgate and turn on the garden hose. She's clean in a minute and the upholstery ignores moisture.

I have women relatives who have a habit of latching onto the inside door handles with a death-grip whenever I sail into a corner or slice the traffic thin. They don't seem to realize that accidents happen that way. The Jeep uses push-button door-releases which keep this brand of jittery passenger in the seat where she belongs.

Although, after the Reno road race, we covered the 475 miles to my place in Santa Monica in frantic haste, you make a gross error in trying to evaluate the Jeep in terms of speed or acceleration. It's a utility vehicle and, as such, it corners its field. Don't let the word utility frighten you. It's also a terrific all-around family machine; what it lacks in class and glitter it makes up for in honest work and faithful service.

—Eric Rickman

GENERAL SPECIFICATIONS

ENGINE

Type	Four cyls. F-head (push-rod intake valves, side exhaust valves)
Bore and stroke	3⅛ x 4⅜ ins.
Stroke/bore ratio	1.40:1
Displacement	134.2 cu. ins.
Maximum bhp	72@4000 rpm
Bhp/cu. in.	.537
Maximum torque	114 lbs.-ft.@2000 rpm
Compression ratio	7.4 std. Optional—6.9 and 7.8

DRIVE SYSTEM

Manual shift with three speed transmission and two-speed transfer case. Transmission ratios:
First—2.798 Second—1.551
Third—1.000 Reverse—3.798
Transfer case ratios: Normal—1.00 Underdrive—2.43
Axle ratio 5.38:1

MISCELLANEOUS

Wheelbase	118 ins.
Overall length	182½ ins.
Overall height	74⅝ ins.
Overall width	66⅝ ins.
Tread	Front—57 ins., Rear—63½ ins.
Turns, lock to lock of steering	3
Curb weight	3240 lbs.
Weight/bhp ratio	45.0:1

TO GIVE YOU an idea of the station wagon's roominess, we loaded seven of the office's girls aboard. This still left a great deal of payload space behind the wide, comfortable rear seat

Sporting Scene

(*Continued from page forty-nine*)

whose budgets can't stand costly souping-up and custom featherweight bodywork. What can be done by a competent driver in a completely stock sports car was demonstrated by John Van Driel as he pushed his MG TC into a comfortable lead, until a fouled plug forced him out. At the end, B. Jones in a TC took over lead position from Morris Carroll, Race Chairman, while Bill Lloyd placed third.

The next two races were halves of one main event known as the Charles W. Miller Memorial Trophy, split in two because of the large field. Both halves required 60 laps, but the first race was for cars of 1500 cc and up. Final results were evaluated on the difference between each car's actual average speed and its pre-set handicap average.

There were 24 starters in the first half. On the first lap, Marsh Thomas's MG TC came whizzing by, followed by Dave Ash (MG), Gentry Smith's "Eightball," Alvin Penn's Silverstone Healey, Ken Denston's SS100, Harry Grey's ear-splitting Connaught, and Viall's Lester MG. Then the XKs of Walter Hansgen, Robert O'Brien, V. Rogers, and Charles Schott joined the fray with Bob Meyer's Muntz Jet.

MG CAR CLUB ROAD RACE RESULTS

October 21, 1951

Convair Trophy
(10 Laps—15.8 Miles)

1. Marth Coler (MG-TD), 2. Nancy Ehrman (MG-TD Mk II), 3. Anese Ash (MG-TD Mk II). Winner's time 19:6.75—49.5 mph

J. S. Inskip Trophy
(20 Laps—31.6 Miles)

1. B. Jones (MG-TC), 2. Morris Carroll (MG-TD), 3. Bill Lloyd (MG-TD). Winner's time 36.30—51.94 mph

Charles W. Miller Memorial Trophy
(60 Laps—94.8 Miles)

First Race (1500 cc and up) 1. John Fitch (Ferrari), 2. Walter Hansgen (XK-120), 3. Briggs Cunningham (Ferrari). Winner's time 1:43.50—58.20 mph
Second Race (1900 cc and under) 1. Gus Ehrman (MG-TD Mk II), 2. F. Koster (HRG), 3. R. Fisher (MG-TD Mk II). Winner's time 1:50.32—54.30 mph

In the second half there were 28 starters for cars under 1900 cc, from Tony Pompeo's GMC-powered Alfa-Danese to the three Crosleys of Sauvigne, Sanderson and Jewell. Almost from the outset, the relentless battle between the Mark II MGs of John Gordon Bennett and Gus Ehrman stole the show. George Sanderson's game Crosley maintained the handicap lead for 48 laps, with Bennett and Ehrman in hot pursuit, but the pair was too much for Sanderson, and Bennett moved into the lead spot, lapping at 55 mph, only to be passed by Gus. They traded places twice more in a single lap, after which they settled down to game of tag, Bennett never more than a few lengths behind and often right up on Ehrman's tail. Bennett retired from the race on the 58th

(*Continued on page fifty-nine*)

My Choice—DB2

(*Continued from page twenty-four*)

ing situations by going into corners too fast here. We kicked the Aston harder and harder, sorting out the gearbox at will, using all the reserve it had, and it took it like a champion. When we went into corners too fast, we just threw it sideways and broke it down to a reasonable speed, then went right on around the corner with no violent maneuvers of any sort. Even for the passenger it was not disconcerting. Later experience confirmed these early conclusions. If the car slides, it's very easy to control—the steering is quick enough so that control may be regained quite readily. Wet-weather behavior is something else, but that is more the fault of the tread on the tires I'm using now. You can bust the wheels loose in the lower gears quite easily and get started into something. You really shouldn't with a good tire.

As far as competition qualities are concerned, I'm convinced the Aston has plenty. In the few top-speed corners I've tried, one thing is apparent. There is no particular method that has to be used. You can drive into the corners hard, making a definite non-sliding turn out of it with the front end sort of tending to drift while you are accelerating away from the corner, or you can put it into a nice four-wheel drift and go around the corners that way. At will, you can shake the back end or the front end loose. Handy to do both or either in case of emergencies.

It's a little hard to explain why I like to drive the way I do—not recklessly, but sportingly. But don't dismiss the DB2 just because it can be driven that way. Actually, there's no reason why an American car should be so built that it gives true sports car performance. I'm not advocating that. But I have driven all the new ones—Chrysler, Cadillac, etc.—and none of them can do enough for me. It wasn't always that way. There was a time when the best American cars could hang on to corners well, could be driven over rough roads at high speeds safely. New cars are just too difficult to handle. Take Chrysler's power steering. Very nice, but it feels as if the wheel isn't attached to anything at all. The feeling of positive control, so essential to good driving, isn't there. And the Cadillac—there are too many turns so that if you ever get tangled up in steering you might as well give up and bail out. The stock American car is not built for cornering—fore-and-aft balance is not good, for one thing, and the springs are too gooey. The cars will usually track in a straight line wonderfully, but any deviation and you're lost.

I think a scaled-up Aston near American size with, say, a 4½ liter (274.5 cu. in.) engine would be a very desirable piece of equipment. There's nothing really expensive about the Aston to manufacture except, perhaps, the twin overhead cam shafts. Ten or fifteen years ago Chevrolet tried a front suspension similar to the Aston's. If they'd tried a little harder, they might have made it work quite well. It certainly wasn't expensive.

Two features of the Aston that should appeal to everyone are its gasoline economy and its endurance. On the trip to Reno, mentioned earlier, economy was proven when we averaged 22 miles per gallon despite the 70 mph average speed. Small-displacement engine, extremely high volumetric efficiency, and high top-speed gearing make this possible. Yet, though the engine revs up to 6000 rpm, piston speed is low at cruising range. At 88 mph in top, piston speed is only 2500 feet per minute. This is one of the reasons for the Aston's reliability—it led its class in the world-famous Le Mans 24-hour endurance race. It's a rare engine that will go flat-out practically all day and night without rest.

So I bought an Aston-Martin DB2. $5200 is not a bargain price in anybody's league, but if that's what it costs to get the best, it's worth it. —Phil Hill

Color on Your Car

(*Continued from page fifty-three*)

el myself, rent a sprayer and save some money on my paint job?" The answer is this: automobile painting is a highly-skilled trade and unless you are thoroughly familiar with the techniques, you'll lose time and money by not turning the job over to a professional.

I know of many cases where economy-minded motorists tried to paint their own cars only to make a sorry mess of the job and wind up by taking it to a professional painter to clean up. One that sticks in my memory was a chap who tried to put a cream-colored lacquer over yellow air-dry enamel. It produced a chemical reaction that wrinkled, cracked and checked. His car looked as if someone had thrown gobs of cottage cheese at it. It required sand-blasting to get down to bare metal and his bill was three times as much as if he'd gone to the painter in the beginning.

What should you pay for an automobile paint job? You'll be tempted by gaudy advertisements, but I'd say that a decent enamel finish will run around $75 while a lacquer will cost from $150 on up, depending upon the amount of time and experience that goes into it.

Treat your automobile painter as you would any professional man. Tell him the general effect you're trying to achieve and then be guided by his suggestions. I had one fellow tell me: "I want this Olds to look long, low and racy—how about a good black?" Diplomacy, tact and salesmanship were required to explain that any color *but* black would make it longer, lower and racier. And in the end he was very happy with an inca bronze. —Vince Aldrin

Sporting Scene

(*Continued from page fifty-seven*)

lap, when his Mark II swallowed a valve.

Gus Ehrman took first place while F. Koster came in second. Robert Fisher's Mark II MG placed third.

ARROWHEAD F.C.C. RUN

TWENTY HIGHLY polished and finely tuned imported cars were started at one-minute intervals for the 144-mile run between San Bernardino and Palm Springs in this year's Palms and Pines Reliability Run sponsored by the Arrowhead Foreign Car Club on November 4th.

Two concealed check points along the circuitous route accounted for most of the points lost. The contestants were required to maintain a constant speed over the entire course and were charged with a forfeit of one point for each minute early or late at check point.

Bering Monroe, driving his red Mark II MG, barely nosed out Ernestine Weaver in her new Mark VII Jaguar to win. Manka Kramer in her Austin Sports tied with husband Tom Kramer for third position in the sweepstakes. In all there were 13 entrants in the run. The winners were presented with their awards at a dinner meeting in San Bernardino.

MT. EQUINOX HILLCLIMB

THE LATEST ATTACK on Mount Equinox, Vermont's six-mile car killer, was performed under none-too favorable weather conditions—sleet, fog, and rain hampered the SCCA's race this year.

Even so, the enthusiasm of the 33 participants was undaunted as they tackled the 10 hairpins and many lesser curves on the brutally rough, unpaved road. The

MAX HOFFMAN (right) receives Class VI trophy from Bill Kemp, SCCA's New England activities chairman. Hoffman's 1.5 liter Porsche, revolutionary new German car, made outstanding small car climb in 3:38.2, outshone larger cars

course challenged drivers and cars alike with its fantastic grades and, at times, sheer drops of hundreds of feet.

Wild slides were common on the treacherous, rock-strewn hairpins, as drivers applied power. This subjected fenders, bodywork, and tires to a merciless beating and

(*Continued on next page*)

Sporting Scene

(*Continued from preceding page*)

most of the racers rocketed over the finish line with boiling engines.

On the GO signal, George Weaver's Maserati blasted its way upward, once again to make the fastest time of the day in exactly three minutes. Johnny Fitch, second fastest in Class I with the Cunningham, top up and windshield wipers busy, took 15 secs. longer. Alexis du Pont, totally unshielded in his Cooper, was only .2 sec. slower.

Max Hoffman, in a 1.5-liter (91 cu. in.) Porsche convertible, made the outstanding small car climb of both days, barrelling through the finish line in 3:38.2. This time was as fast as one of the XKs, quicker than all four cars in the class above, and nearly 18½ secs. better than Marshall Green's MG TD.

In Class III, Warren Collins' XK reversed the previous day's positions on Dave Garroway, bettering the latter by 1.8 secs., but this was no match for Bob Wilder's Allard which proved an easy class winner in 3:13.6. Although not present during the practice run, Bob's performance deserves all the more credit. The same was true of Ned Curtis, whose unprepared Aston Martin DB2 climbed well to take second spot behind Charlie Moran's blown MG TC.

—Jim Potter

MOUNT EQUINOX HILL CLIMB
OCTOBER 28, 1951

	Official Run 2.5 Miles	Practice Run 5.35 Miles
UNLIMITED CLASS		
1. George Weaver (Maserati)	3:00	6:59.5
2. John Fitch (Cunningham)	3:15	7:19.5
3. Alexis du Pont (Cooper)	3:15.2	
4. Anthony Luther (FWD Miller)	3:48.7	10:26
CLASS II		
1. Preston Gray (K2 Allard)	3:06.7	7:33
2. John Meyer (Meyer Special)	3:19	7:31.2
3. Paul Timmins (K2 Allard)	3:21	
4. Garrett Fuller (Lagonda-Mercury)	3:30.3	8:06
CLASS III		
1. Robert Wilder (J2 Allard-Ford)	3:13.6	
2. Warren Collins (XK-120)	3:26	8:01.4
3. Dave Garroway (SS-120)	3:27.8	7:47.4
4. Bob Said (XK-120)	3:32.2	8:08.8
5. Roger Merrill (XK-120)	3:32.4	8:30
6. Pete Crocker (XK-120)	3:38.2	8:06
7. Britt Ragsdale (XK-120)	3:56.2	
CLASS IV		
1. Briggs Cunningham (Ferrari)	3:18.7	7:48
2. John Saburn (Riley)	4:13.8	10:38.6
CLASS V		
1. Charles Moran (MG-TC s/c)	4:04	8:58
2. Ned Curtis (Aston Martin DB2)	4:12.5	
3. Guy Atkins (MG-TD s/c)	4:13.2	8:55
CLASS VI		
1. Max Hoffman (Porsche)	3:38.2	
2. Marshall Green (MG-TD)	3:56.6	9:19
3. Peter Isolin (Offy-HRG)	3:57.9	8:30.6
4. Charles Deane (MG-TD)	4:08.2	9:34.6
5. Kasimir Krag (MG-TD)	4:11.2	10:02
6. Anthony Luther (MG-TC)	4:12.4	9:38
7. Ted Johnson (MG-TD)	4:15.4	
8. Peter Smith (MG-TD)	4:22	9:35
9. Fred Sinon (MG-TD)	4:30	
10. Cdr. H. F. McHugh (Porsche)	4:46.7	10:17.4
11. Robert Meyer (MG-TD)	4:52.1	11:02.8

RESULTS
Overall Fastest Times

1. George Weaver (Maserati)	3:00
2. Preston Gray (K2 Allard)	3:06.7
3. Robert Wilder (J2 Allard-Ford)	3:13.6
4. John Fitch (Cad-Cunningham)	3:15
5. Alexis du Pont (Cooper)	3:15.2

The Packard Twelve

(*Continued from page fifty-four*)

ance, but when popular design crossed with tradition, the old gave way to the new. Finally, the Twelve was no longer worth maintaining. The Super 8 took over all the functions of the big car. Nowhere is this more apparent than in the semi-customs of 1938—most of the Rollston bodies were available on the 127-in. Super 8 chassis only.

The big year for Packard semi-customs was 1934. This was also the last year until 1938 that any great emphasis was placed on luxury around the Packard plant. Between those dates, everybody was too busy grinding out 120s and 110s.

For the '34 catalogue, Dietrich made five bodies and LeBaron four. Dietrich's convertible sedan and convertible "victoria" later were incorporated, virtually without change, into the Packard stock bodies of the ensuing years. Both the Dietrich line and LeBaron line can be distinguished from stock-body '34s by the sloping hood louvers and the V-shaped windshields. Good as these farmed-out bodies were, Packard takes the prize for the most inventiveness that year with its coupe, illustrated on the title page of *Classic Comments*. This car belongs in the same category with the few other contemporary attempts to build the car of the future. Pierce-Arrow's Silver Arrow, Cadillac's "Century of Progress" exposition piece are two of the most famous examples. As far as I know, the Packard coupe exists only in the catalogue, though a few were probably built for shows.

When the Twelve passed out of existence in 1939, the Cadillac V-16 went with it. Now there were no more classics of the traditional design. Rollston and Darrin continued to pound out special bodies for the Packard Eights, but these were definitely more modern than classic, except for a few town cars. Lincoln's big Ks lasted through 1940, but that last year was only a continuation of the '39 line. No American production car of the subsequent years has ever matched the sheer power and severe massiveness of those depression-born automobiles.

And, if Detroit has its way, there will never be another classic design for the American consumer. The reason is simple —nobody wants to buy one. The English can still make and sell a Rolls-Royce; French manufacturers produce Delahayes and Talbots for prices that hover right around the $10,000 mark; Italian craftsmen have a ready market for their expensive wares. Most of these present-day classics are finding buyers in Europe, however. Just why the Americans are content with production-line machines today is a problem for the sociologist to solve.

—Eugene Jaderquist

XP-300 by Charles Chayne

(*Continued from page forty-seven*)

An adjustable steering wheel is the final touch to make the car comfortable for persons of any stature.

It is very difficult to go into the details of the XP-300 because what I write would only be true the day it is written—some time before this appears in print—and by the time you read this story the car might be quite different in many respects. The XP-300 is truly a laboratory on wheels and the only life it will know will be one of constant change. Between the time of the original press release on the engine features and the time of this writing we have made important changes in the intake system—we are now planning appearance changes in the interior of the cockpit which will be underway when this appears in print and we are working on layouts of a new suspension that will be built after we learn a bit more about what is now on the car. As you can see, things are not going to stand still.

With the warning of the previous paragraph I give you the following brief summary of the XP-300's specifications.

XP-300 SPECIFICATIONS

ENGINE

Type	Pushrod 90° ohv V-8
Bore and Stroke	3¼ x 3¼
Stroke/bore ratio	1:1
Displacement	215 cu. ins.
Maximum bhp	335 @ 5200
Bhp/cu. in.	1.56
Maximum torque	381 lbs.-ft. @ 3650 rpm
Compression ratio	10:1
Supercharger	Roots type, 3-lobe, helical rotors

DRIVE SYSTEM

Special Dynaflow, torque converter with 11% gear reduction built in—planetary gears for low range and reverse. De Dion rear axle, 3.6:1 ratio. Transmission ratios not quoted. Two U-joints on drive shaft, two on each axle shaft.

MISCELLANEOUS

Wheelbase	116 ins.
Overall length	192.5 ins.
Overall height	53.4 ins.
Overall width	80.3 (front bumper)
Tread	Front 59.1 ins., rear 60 ins.
Tread/wheelbase ratio	1:1.95
Turns, lock to lock	3.14
Weight (Nov. 5, quoted by Mr. Chayne)	4000 lbs.
Weight/bhp ratio	11.9:1

SUSPENSION

Front	Torsion bars, from lower control arm at wheel to toe board.
Rear	De Dion axle with coil springs and radius arms. Brake and drive torque reaction taken by differential carrier, brake and drive thrust taken by radius arms.

XP-300's Engine

(*Continued from page fifty-two*)

cult problem, the solution of which made for a slightly, but significantly more compact engine.

While concerning ourselves with the engine's upper end, let's ask, "Why the 90-degree valve inclination, rather than some other angle?" Buick's answer to this one is that theory is great up to a certain point. After that, there's no telling what will give the best results. After two years' development on the test bench, it was found that the 90-degree head made for the straightest possible flow. Why is the exhaust port so small in relation to the intake port? Here, the engineers have compromised as they must so often. There is a fixed amount of space available and if one port is made larger, the other must be reduced in size by an equal amount. Since Buick believes that the exhaust stroke is not as sensitive or important a part of the cycle as the inlet stroke, the intake ports were given the edge in size.

The side-draft, aircraft-type carbs were chosen for their compactness, for their space-saving qualities. Why the supercharger? To load the engine, to stress it, to make it reveal its flaws under ultimate output conditions. The blower rotors have three lobes each, of helical or spiral form, since this design holds noise at a minimum.

Why the dual fuel system? Why are both gasoline and alcohol used? The XP-300 has been designed to operate on premium pump fuel at well under maximum power output, which is seldom required. But by maintaining the appropriate tank filled with methanol, the engine's full power potential can be called upon at any time. The alcohol, of course, makes for a lower inlet manifold temperature, permits the induction of a denser charge. This Chevrolet-sized engine is a terrific power-producer on gasoline, would be sensational even without its blower.

Ignoring the supercharger and the trick fuel, we see in the XP-300 engine a clear-cut prediction of things to come. A basic element of this experimental program was exploration of the possibilities inherent in light alloys for engine construction. The highest possible stresses are being set up so that the most can be learned in the shortest time about the behavior of light metals. With a normal induction system, this engine becomes not the spare-time plaything of GM's brightest brass, but a definite blueprint of the passenger car engine of a few years from now—a combination of top performance, economy, compactness, and simplicity.

Those of MOTOR TREND's staff who observed the car in high speed operation and made test runs in it agreed that the car appeared to have one outstanding shortcoming: power losses in the modified Dynaflow transmission seemed to be considerable. I think that all of us would have "bought the job" without hesitation had it been fitted with a more positive type of transmission.

It's very significant that GM has chosen to expose this much of its experimental program to the public. In the past, experimentation has been done behind locked doors. The XP-300, and its brother Le Sabre, are evidence of a new public-relations policy by the largest producer in the industry. The gleaming, low-slung bodies are largely decoration for the engines inside; designed to interest you in the results of multi-million dollar research programs. And that's very healthy. Customers who appreciate better engines will buy better cars.

—Griff Borgeson

OVERSEAS NEWSLETTER

(*Continued from page forty-one*)

are driven, instead of by a tower of spur gears or a long chain, by a vertical shaft using the almost unheard-of expedient of a worm gear to operate the two cam-drive gears. Ordinary independent suspension in front is in contrast with the extraordinary cantilever rear springs—shades of the vintage Rolls-Royce! The Salmson comes fitted with preselector gearbox of the Cotal variety, operated by a tiny shift-switch on the steering column, somewhat like the device used on the later Cords.

Optional displacement is a big selling feature of the Dyna Panhards for '52. These tiny, superbly performing cars are now available with engines of three different bores: 72 mm, 79.5 mm, and 85 mm. The crankshaft is not tampered with, and stroke is an unchanging 75 mm. This gives displacements of 610 cc (37 cu. in.), 745 cc (45.5 cu. in.), and 850 cc (52 cu. in.), a variety suited to the subtlest shades of purse and performance requirements. New body style for the line is a two-seater economy sports car, the Dyna Junior.

SPAIN: The most promising new make in a long time is represented by the powerful Pegaso whose engine was pictured in last month's MOTOR TREND. The 2½-liter V-8 has twin overhead cams and a five-main-bearing crankshaft. Pegaso, like Ferrari, has a five-speed gearbox which, interestingly enough, forms a unit with the de Dion-type rear axle assembly, and there are, as in Cunninghams and Allards, inboard rear brakes. Bore and stroke is 75 x 70 mm, considerably less than unity. The crankcase and engine block consist of a single light-alloy casting; steel cylinder liners are made water-tight by rubber seals. An interesting touch is the use of a free-floating aluminum bushing in the lower end of the well-machined con rods. There are two valves per cylinder in the light alloy cylinder heads; valve guides are bronze, and, in harmony with current theory, intake valves are larger than the exhaust valves. Camshaft drive is by roller chain on the sports model, by gear tower on the racing adaptation. Another unusual feature is the incorporation of an oil radiator into the lower portion of the conventional water radiator. The Pegaso's construction is of unit chassis-body type. There's torsion bar suspension all around, and the weight of the two- or three-seater sports body is under 2200 lbs.

Compression ratio is 8:1, and because of the "mechanical octanes" designed into the power unit, smooth operation is possible with pump fuel of as little as 72 octane rating. Optional compression ratios are available for higher-octane fuels, and when special racing fuels and pistons are used 13:1 can be achieved. A claimed straight horsepower curve completes Pegaso's impressive picture. And how will all this power perform? Perhaps we'll see at Le Mans in 1952.

—A. Devereux

WATCH FOR this one to be available in America soon: it's the new, British-made Ford Zephyr Six, is as advanced as the fine Ford Consul. Note grille's resemblance to that of DB2 Aston Martin

SELL 'N' SWAP

Requirements are: copy limit of 25 words (not including name and address), first come, first served; we reserve the right to edit where necessary; we are not responsible for accuracy of descriptions although we will reject any misleading statements. This service is not open to commercial advertisers. No ads will be accepted if payment is not made in advance and such communications will not be acknowledged. Address your request to Sell 'N' Swap. The charge is just one dollar—Editor.

IMPORTANT NOTICE! Only one CAR may be listed in any single Sell 'N' Swap insertion. This limitation will not apply to parts, catalogs, etc.

SELL—'46 Lincoln Continental conv.; beautiful light blue, good top, nice condition. $1895. J. F. Toole, 6530 Verona Rd., Verona, Pa.

SELL—'23 Model A Duesenberg race car. Two engines and most of a third, many more spare parts. Not able to restore. One engine a special. H. Hinde, Roscoe, Ill.

SELL—Cord conv. model 810. Engine, transmission and body good. Spare engine. Complete spare parts except gears. Also four-door sedan body and chassis. The whole works $950. C. E. Smith, 23400 Hoover, Ave., Hazel Park, Mich.

SWAP—Trade '50 XK 120 for Mark VII, Alvis or Riley. This XK is as new; custom top, driving lights, heater, etc. R. Snook, Iowa Falls, Iowa.

SELL OR SWAP—Graham supercharger complete with oil and water lines, coupling and mounting bracket. Swap for dual intake manifold for '48 Studebaker Champion. Log type preferred. M. Simpson, Stronghurst, Ill.

SELL—Midget car, new V8-60 engine, tires 4.00x12, without body. Will sell or trade for real old car. L. Downing, Manston, Wisc.

SWAP—'34 Cadillac V-8 town sedan; excellent, 4,000 miles, side mounts, wire wheels, removable disc, "Ride-Control." Want British sports car or what have you? J. H. Alexander Jr., 2241 Rugby Row, Madison, Wisc.

SELL—1287 cc six cyl. SOHC. MG. Magnette engine and transmission, complete, 1500 miles since overhaul. Excellent competition possibilities. $350 or make offer. B. Kilpatrick, Box 143, Canyon, Calif.

WANTED—Wills Sainte Claire, any year, V-8 touring or roadster. Write details to W. H. Gilbert, 304 N. Yosemite, Oakdale, Calif.

WANTED—'50-'51 Cadillac engine complete. W. H. Plyne, 7121 Montgall, Kansas City, Mo.

SELL—'34 Rolls-Royce, custom built for Duke of Windsor at cost of $100,000, by Hooper. Called "Most Beautiful Car Ever Built"; runs well. J. Eberhardt, 1445 River Rd., Edgewater, N. J.

SELL—'50 Kurtis Kraft red sport roadster. Whitewall tires, S W heater, overdrive, tan top with side curtains, 9,000 miles. Mercury semi-race engine. D. Stoffel, 5387 Bowmanville Rd., Chicago 25, Ill.

SELL—'41 Buick Century sedanette, 165 hp, dual carbs., engine A-1, body poor. Price $250. B. H. Montgomery, Sauk City, Wisc.

WANTED—Supercharger and overdrive for '49 Chevrolet. P. Lenertz, 3035 N. W. 22nd Court, Miami, Fla.

SELL—'31 SV-16 Stutz conv. coupe. Durham aluminum body, six wire wheels, showroom condition. $1700 cash or trade for equity in recent sports car. R. W. Smith, c/o Smitty's Drive In, Gen. Del., Quakertown, Pa.

SELL—Classic '40 Cadillac 60 S, perfect chrome, black, new upholstery, and carpets. Completely rebuilt engine and chassis. F. van Beuren, Hamburgo 40, Mexico City, Mexico.

WANTED—Two brass headlamps for two cyl. Maxwell. Quote price and condition. F. B. McPhillips Sr., 10568 Gandy Blvd., St. Petersburg, Fla.

SELL—MG four-passenger tourer. Similar to one owned by Pacific Auto Rentals, only two cut-away doors. Two litre, powerful, fast and serviceable. M. Vaughn, 933 W. Peachtree St., Atlanta, Ga.

SELL—BMW sport competition roadster, three carbs, tubular frame, perfect engine. Cash or trade for Mercedes 540 K coupe. H. C. Osborn, 2103 Broadway, San Antonio, Texas.

SELL—'37 model Mercedes-Benz conv. two-door sedan; new engine in rear. $750 cash or trade 540K or Alfa, pay difference if necessary. H. C. Osborn, 2103 Broadway, San Antonio, Texas.

SELL—BMW conv. coupe, special model 328 engine, three carbs, new whitewalls, 25 mi. gal. $2850 cash or Mercedes 540K or Alfa. H. C. Osborn, 2103 Broadway, San Antonio, Texas.

WANTED—Used or wrecked Jaguar XK 120. W. Jones, 2755 Reservoir Ave., Bronx 68, New York City, N. Y.

SELL—Austin and Bantam axles, springs, frame, steering, Bantam transmission, wheels, tires, generator and starter. Two V8-60 engines, one with all new parts, Edelbrock heads. Cheap. C. J. Klish, 7624 S. Laramie, Oak Lawn, Ill.

WANTED—Need for '41 Lincoln Continental radio panel for dash, radio too, if not expensive, medallion for side of hood, front floor carpet, info on getting better mileage, faster acceleration, and higher top speed. J. G. Knechht, Bradwell Rd., Barrington, Ill.

WANTED—'27-'28 Super Eight Packard in good condition. R. Fairbank, Box 67, Morro Bay, Calif.

SELL—Vitameter, tank, fittings, instructions for '51 Studebaker V-8. New, never been installed, including two cases Vitane (48 qt. cans). $41 FOB New Mexico. C. South Jr., Box 3, Holloman, N. M.

SELL—Auto sales catalogs: Packard, Cadillac, Lincoln, orphan and foreign cars, minimum $5 each. MoTor (N.Y.) Annuals. Details for large, stamped self-addressed envelope. A. Twohy, 400 N. Kenmore, Los Angeles, Calif.

SELL OR SWAP—'32 La Salle four-door sedan. Excellent condition, 58,000 original miles. $300 or later model car. C. Sterling, 32 Mitchell Place, White Plains, N.Y. WH 8-5144.

WANTED—Good home and kind master for '28 Buick sedan, 57,000 miles, perfect body. Want shop manual for Cadillac V-12. Sell cheap. Retreadable 32 x 4 carcasses. R. Dorr, 838 Balra Dr., El Cerrito 8, Calif.

WANTED—'32 Chevrolet coupe with rumble seat in good or restorable condition. Send price, condition, and picture of car. R. Bladel, 6638 S. Ashland, Chicago 36, Ill.

SELL—'41 Ford conv., dual mufflers, wolf whistle, musical horns, radio and heater. $400. Good car for customizing. H. Wilk, 250 Ocean Parkway, Brooklyn 18, N.Y.

SELL—'36 Ford deluxe phaeton. Original black paint and genuine leather interior. Heater, directional signals and new plastic curtains. $450 or best offer. L. S. Stafford, RFD 1, Wakefield, R. I.

WANTED—To correspond with Citroen owners and other front-wheel drive enthusiasts. J. S. Burnham, 1004 Gambier Ave., Mt. Vernon, Ohio.

WANTED—Complete transmission with or without ring and pinion gears. Or complete set of gears to fit '34 Citroen model 11. Please state price and condition. T. G. Daniels, 4018 Kingman Blvd., Des Moines, Iowa.

WANTED—Hood ornament for '32 Pierce-Arrow. Will give away parts for '33 Pierce-Arrow sedan. You pay freight, etc. L. Phillips, Box 141, Loleta, Calif.

WANTED—To hear from automobile owners who have converted to butane-propane gas. Information regarding good and bad features of this system. B. Janosica, 665 Garnsey Ave., Joliet, Ill.

SELL—Edmunds custom hi-compression head, 8.5:1 for Studebaker Champion, used 3000 miles, like new. $35. Also four Firestone 6.40 x 15 tires, never mounted, $80. J. F. Sharp, 1950 Airport Rd., Rt. 7, Pontiac, Mich.

SELL—'28 Whippet roadster, new paint, rare. Also '50 Studebaker five-passenger coupe. Want TC, SS-100 or other sports car. PFC Rick Carter, 3763 St. Sqdn., SAFB, Wichita Falls, Tex.

SELL—292 cu. in. GMC engine, Vinola pistons, 8.5:1 compression ratio, Schooler cam, perfect condition. Built for Chevrolet, $300 FOB. L. B. Jones Jr., 4619 Iroquois Ave., Jacksonville, Fla.

WANTED—'36 Ford coupe fenders, new or used if excellent. Also Ford speed equipment and Columbia axle. O. R. Smith, 953 Penn Ave., Akron, Ohio.

WANTED—Collection of auto badges, both modern and antique, particularly European. Also original radio and accessories for '41 Lincoln Continental. Send information and price. D. Chenault, 1330 Post Rd., Rye, N. Y.

WANTED—Body parts for '34 Ford cabriolett type 40-760. Chrome windshield frame, radiator grille, greyhound radiator cap, leather front seat, window weather strips. W. G. Williams, 9 East Huron, Chicago, Ill.

WANTED—Simca Eight body, stock, sport or custom. Or will sell or swap new unused Simca Eight chassis for sport or small foreign car. F. P. McNess, 1403 W. Lincoln Blvd., Freeport, Ill.

WANTED—'36 Hudson Eight four-door custom sedan. 127 in wheelbase. Want exceptionally good body, chrome interior, and prefer original dark green paint. Fair engine. J. E. Lewis, 817 Franklin Ave., Youngstown, Ohio.

SELL OR SWAP—'41 Hollywood Graham, new condition, original owner, 36,000 miles, new whitewalls. Want Duesenberg, double cowl phaeton, long wheel base. T. Owens, 458 W. Main St., Grafton, W. Va.

WANTED—'32-'34 Ford B or V-8 pickup. Body restorable. Running gear and engine unimportant. All replies answered. Reasonable. R. N. Zautner, 1500 New Scotland Rd., Slingerlands, N.Y.

SELL—'49 Cadillac 60 special Fleetwood, 25,000 miles, fully equipped. A-1 condition. Like-new US Royal Master Mid Century tires, whitewalls, dark blue. $2850. S. Epstein, 5636 Leavenworth St., Omaha, Nebr.

SELL—'26 Rolls-Royce Silver Ghost, four-door phaeton. Horizontal louvered radiator, 19,000 actual miles, never touched by a wrench. Best offer takes. C. Murray, 1037½ E. 1st St., Long Beach, Calif.

SELL—'36 Cadillac V-16 conv. sedan, 59,000 miles, body and engine perfect. Two-speaker radio, many luxury features. Classic gem, well worth best offer over $1000. C. Murray, 1037½ E. 1st St., Long Beach, Calif.

SELL—'50 Oldsmobile engine, purchased in auto 2/9/51. Used two months, complete as pulled from auto, no transmission. Like new, $475 or best offer. T. L. Green, 712 Oglethorpe St., N.W. Washington, 11, D.C. TUckerman 1523.

SELL—'32 Auburn 12 parts; front and dual-ratio rear axle complete, wheels, extra knock-off hubs, also Ross steering gear. Nothing reasonable refused. T. L. Green, 712 Oglethorpe St., N.W., Washington 11, D.C. TUckerman 1523.

SELL—'26 Pierce-Arrow club coupe, black, paint and body good. Fenders fair, tires worn, mechanically good, only two owners, real mileage 47,000. $325, pictures available. A. E. Corbin, 55 Kings Highway, Westport, Conn.

SELL OR SWAP—'39 Packard twin-six limousine, six-passenger. Needs minor repairs, body and fenders excellent. $200 or will swap for amateur radio gear. S. Kowal, Killingly Ave., Putnam, Conn.

SELL—Dual oh cam '50 Manx Norton 500 cc engine, Manx gearbox; raced twice, ideally suited for 500 cc car. $500. R. Kelly, 500 36th Ave., San Francisco, Calif.

SELL—'39 Packard V-12 sedan, 54,000 miles. Fine running condition, very clean. C. J. Pevear, 36 Kings Beach Rd., Lynn, Mass.

SELL OR SWAP—'41 Hollywood Graham. Engine just rebuilt, new paint, body and glass like new. Make offer or will trade for late model car. L. Williams, 5911 Gillan Rd., Lincoln, Nebr.

SELL—Packard 12, last series, 23,000 actual miles, chauffeur driven, mechanically perfect, paint excellent, upholstery like new, tires excellent, two never on ground, $31 tubes. D. W. Hurley, Cleveland, N. Y.

SELL—'36 Auburn eight sedan, model 852, dual ratio, runs, needs work, sell highest bidder. R. Williams, 8037 E. Garvey Ave., Garvey, Calif.

WANTED—Used or wrecked Jaguar XK120. Wm. Jones, 2755 Reservoir Ave., Bronx 68, New York, N. Y.

WANTED—Four '40-'41 Bantam connecting rods forging #A8831. A Crosley short block, must be reasonable. R. Carey, 495 Freeland Ave., Calumet City, Ill.

WANTED—Mercedes-Benz 540-K sports tourer or conv. H. F. Smith, 255 E. Bayview Ave., Merrick, N. Y.

SELL—'41 Graham customized Hollywood sedan. Immaculate condition throughout, new beige finish, 8000 miles on engine and blower, new leather interior, pictures on request. $700. R. H. Rohde, 3150 N. 83 St., Milwaukee 16, Wis.

SELL—Chromed accessories such as: Air cleaner, velocity stack, Stromberg 97 carb, fuel pump, AC pump stack. Everything like new, very very reasonable. B. J. Plunkett Jr., 2507 E. 18 St., Altoona, Penna.

SELL—'41 Cadillac 62 conv. coupe, good condition. Red and white leather upholstery, hydramatic. Would take good '31 Model A pickup or roadster in trade. S. B. Hagberg, Box 131, Mapleton, Ia.

SELL—Custom conv. coupe. La Salle body, Ford mill, slight soup-up. Needs upholstery and some work. New top, white wall tires. Photos, best offer over $800. C. A. Arnold, Randall St., E. Pembroke, Mass.

WANTED—Pair headlight lenses for '28 Lincoln touring car, also windshield for rear seat and pair of glass wind deflectors for front. C. A. Arnold, Randall St., E. Pembroke, Mass.

WANTED—'32-'36 Ford roadster or coupe with or without engine. Body must be in good condition. B. Miller, 1631 W. Washington St., Charleston 2, W. Va.

SELL OR SWAP—Nice clean Cord 810 Beverly sedan, good mechanical condition. L. E. Greenlee, 404 Madison Ave., Anderson, Ind.

SELL—Parts for '41 Hupp Skylark. Engine, transmission, doors, windshield frame and glass and what's left. Also fit Hollywood Graham. Sell all or any part. B. Magnuson, Parks College, E. St. Louis, Ill.

SELL—'41 Lincoln Continental cabriolet, showroom condition. Black lacquer finish, dechromed slightly. Two powerplants, one really hot. Better now than when new. Will take '49-'50 five-passenger Cadillac or cash. L. W. Scheel, 222 W. 9th, Grand Island, Nebr.

SELL—Cords—812 conv. coupe, r & h, whitewall tires, new top, $1000. Also a custom sportsman conv. with plexiglas top, excellent condition, $1350. P. W. Emmel Jr., 6101 N. 7th St., Phila. 20, Pa.

WANTED—Supercharger and pinion and ring drive gears for same for '37 Cord. Have parts for sale or trade for '30 and '37 Cords. J. W. Wensley, 912 E. Park St., Anaconda, Mont.

SELL—Two Model J Duesenberg engines, one in fair condition, complete with transmission. Other has cracked block, no transmission. Best offer accepted. E. H. Smith, 105 Arcadia Rd., 9M, Hackensack, N. J.

WANTED—World War I or earlier aircraft. Any of you antique car scouts found an old plane? I'll give $20 for right lead. T. H. C. Palen, Vassar Rd., Wappingers Falls, N. Y.

SELL OR SWAP—Duesenberg Derham phaeton, ex-Gary Cooper, No. J431, new rubber, paint, A-1 mechanically. $2250 cash or trade on XK120, other sports car, pay difference. I. Coffey, Greenfield, Calif.

WANTED—Information on hopping up and dropping Henry J four and results of same. P. A. Cramer, 248 Buhne St., Eureka, Calif.

SELL OR SWAP—'36 Pierce Arrow V-12, 185 hp limousine. 4700 actual miles, six wheels. Swap for MG or small California sports car. Photo furnished. D. Rose, Canajoharie, N. Y.

SELL—'33 Chrysler Imperial Le Baron conv. sedan. Formerly owned by Clark Gable. Minus engine—which was to be replaced by Cadillac ohv 12 cyl. Price $185. W. Craig, 2556 Humboldt, Oakland, Calif.

SWAP—'51 Jaguar XK120, 8500 miles for K2 Cad-Allard. B. H. Montgomery, Sauk City, Wisc.

WANTED—Transformer for Auburn-Crosley radio, model A5A3 or complete A5A3. Inside and outside door handles, left and right for 851 Auburn speedster. A. A. Potter, Lafayette, R. I.

WANTED—MG, Singer, Jaguar or similar sports car, in restorable condition. Give description and price. Dr. J. M. Cline, 22½ Main St., Champaign, Ill.

SELL OR SWAP—Model A Ford, 60,000 actual miles, everything original and in excellent condition, including upholstery. Sell to highest bidder or swap for good 1½ ton truck. A. Ebeling, 711 E. Jackson St., Kokomo, Ind.

SELL OR SWAP—Stanley Steamer engine, first $400 takes. Baker boiler, extra large, faster, first $400 takes. Steamer parts, Doble steam manuals $10. Catalogs $5. R. McCord, Box 1073, 768 Olive St., Newark, Calif.

SELL—Edmunds dual manifold for Chrysler six complete with carbs., linkage and air cleaners. Used two months and sold car. $45. B. Quinn, 3212 Ave. J. Ensley, Birmingham, Ala.

SELL—Complete chassis '32 Auburn model A100. Knock-off wire wheels, two-speed rear, lowered frame, $75 complete or what do you need for parts? A. Naul, Daylestown, Pa. Phone 255.

SELL—Edmunds dual manifold '49-'50 Ford-Merc. Complete with rec. #97 carbs., linkage and gas lines. $35. G. Schramm, Box 84, Schiller Park, Ill.

WANTED—New or used Model A Ford underslung parts, front and rear; Monroe-type shock absorber adapter kit, and hydraulic brake conversion kit. J. W. Huening, Box 417, Neptune Beach, Fla.

SWAP—'37 Cord Beverly sedan for equity in Plymouth Suburban. Have $650 in Cord. Further information on request. All letters answered. J. Ogan, Rt. 1, Box 230, Folsom, Calif.

WANTED—Bantam '40-'41 crankshaft, Auburn '31-'32 dash, Auburn speedster body, Ford 60, Cadillac and Crosley dual manifolds, heads and other speed parts. R. Sanders, 7 Roger Rd., Nixon, N. J.

WANTED—Used speed equipment for '51 Ford 8. High compression aluminum heads, etc. Perfect condition, reasonably priced. M. Werber, 1441 N. Gate Rd., N.W., Washington 12, D. C.

WANTED—Owner's instruction manual for Packard V-12 Model 1207. H. M. Buhrman, 1772 NW 3rd St., Miami, Fla.

SELL—'51 Henry J six, trunk compartment, special chenille interior, coral paint, 500 miles, cost $1875, sell for $1625. New 40-50 series Buick Edmunds dual manifolds, $28 cod. J. R. Gascho, 1453 Clinton St., Noblesville, Ind.

SELL—'48 Austin A-40 four-door sedan. Stainless steel wheel covers, three spare tires, heater and chains. Very clean, $750. L. F. Ensign, R.D. 9, Pittsburg Rd., North Canton, Ohio.

SELL OR SWAP—'39 V-8 60 engine, radiator and transmission. Second gear chipped. Radiator and engine in A-1 condition. Tools, cash, or accessories will be accepted. Make offer. L. F. Ensign, R.D. 9, Pittsburg Rd., North Canton, Ohio.

WANTED—'33-'36 Packard 12 bumpers, flying goddess radiator cap, tire cover mirrors, also sundry parts for '34 8 or 12, including manual and catalogs. B. Helfenstein, 6115 Burns Ave., Detroit 13, Mich.

SELL—'30 Packard touring, model 733, close coupled five-passenger. Mechanically excellent, good tires, new top, spotlight, trunk rack, $325 FOB. C. H. Pennrich, Greenwood Lake, N. Y.

SELL—Rolls-Royce, original owner Duke of Windsor. This is a large classic car; body needs paint. New tires, new mag. Best offer over $2000. J. De Sena, Pine Tree Trailer Court, North Bergen, N. J.

WANTED—'38 Pontiac 6 conv. coupe in good condition. I will pay cash. J. W. Oliver, 1208½ Washington St., Olean, N. Y.

SELL—1500cc Miller supercharged engine, disassembled. Set extra tubular rods, valve springs, valves, rings, pistons, unsupercharged and supercharged camshafts, two superchargers, Bosch magneto, block, headers. $400. C. B. McKesson, 8219 Longden Ave., San Gabriel, Calif. Phone AT 4-3780.

SELL OR SWAP—'31 Cadillac V-8; rare sports body #384. 75,000 miles, two new 7.50x18 tires. Needs plenty of work. $40. E. P. Burke, 3388 W. 44 St., Cleveland 9, Ohio.

SELL—Antique '30 American Austin coupe; original body. New tires, new battery, new paint job, engine recently overhauled. Car in excellent running condition. $175 takes it. P. J. Lazzio, 406 Maxwell St., Lake Geneva, Wis.

WANTED—'32 Ford V-8 roadster. Body and engine in good shape, fenders not very important. Send picture and information. M. Newman, 2-C Carey Dr., Montgomery, Ala.

WANTED—'34 Pontiac 8 cyl. engine or any '34 Pontiac car with an eight cylinder engine in running order. Condition of body unimportant. D. Bergen, County Line Rd., Barrington, Ill.

SELL—Racing Vertex magneto for '51 Cadillac with extra distributor head, contact breaker, fixed points, condenser and rotor, $60. W. E. Tyler, 424 Nichols Rd., Kansas City 2, Mo.

WANTED—Handbook, service manual, parts list for a '29-'30 six cylinder Chevrolet two-door sedan. W. A. Benedick, BTGFN, B-Div., USS Telfair (APA 210) FPO, San Francisco, Calif.

SELL—'50 Dellow; like new, little "King of the Hills," Wade low pressure blower, 3800 miles, extra blower included. Price $1600. P. M. Reed, 917 Leigh Ave., Orlando, Fla. Phone 25955.

SELL—'30 Stutz; Hibbard et Darrin Berline special. Aluminum coachwork, SV engine. $395. R. W. Cubick, 1733 Gladstone Ave., Youngstown 8, Ohio.

SELL—'36 Duesenberg four-passenger conv. coupe in good condition. Recent complete overhaul, valves, rings, eight new rods, mercury balanced crankshaft. Sacrifice $1100. W. Craig, 2556 Humboldt Ave., Oakland, Calif.

SELL—English Rolls Royce, 25 hp sedan. Mechanically like new. Factory original, with tools $3500. Or trade and cash. B. Marriott, Box 336-A, Rt. 1, Bothell, Wash.

SELL—'34 Pierce-Arrow four-door sedan. Engine excellent, five good tires, clutch, brakes, gears, overdrive and heater. Body needs repairs. Too expensive to operate. $225. B. Harris, 9 Windmill Lane, Scarsdale, N. Y.

SELL—'24 Buick touring car, six cylinder. Reconditioned by factory, perfect throughout, seven new tires. Will deliver to 100 miles. R. W. Morris, P. O. Box 55, Loudonville, N. Y.

SELL—'35 Auburn speedster, engine, supercharger, two-speed axle, paint and upholstery are all new. Dual straight exhausts. Air whistle. Perfect condition, genuine 100 mph. $1350. J. H. Baker, 113 Forest Court, Louisville 6, Ky. Phone TA 6855.

WANTED — Duesenberg, Lincoln (20-33 model), Stutz, early model Studebaker and other cars. Give prices, description and condition. H. Guerin, Box 988, Hammond, La.

SELLING—MG V8 60 conversion just completed. Offie head, semi cam, overdrive, 6.00x16 wire wheels, perfect road or traffic car. Textileather top, heater, cost $3300, sell cash $1900. B. B. Bellows, Secor Hotel, Toledo, Ohio.

SELL—'41 four cylinder Ford pickup, mechanically perfect. Body in fair shape. This engine has great possibilities for souping up. Best offer. J. De Sena, Pine Tree Trailer Court, North Bergen, N. J.

WANTED—'36 or '37 Cord conv. in Eastern US. Describe condition and state price. B. Hollenbach, 525 Walnut, Allentown, Pa.

SELL OR SWAP—'37 Ford V-8 60 engine complete with generator, starter, carb., clutch, transmission, radiator. Heads milled .050 in.—not run since carbon and valve job, excellent condition. H. Wohlers, 98-09 158th Ave., Howard Beach, L. I., N. Y.

SELL OR SWAP—'42 Crosley chassis, less engine, and body. Five wheels, tires, gas tank, steering, brakes, hubs. Trade with above V-8 60 plus cash for Crosley Hotshot. H. Wohlers, 98-09 158th Ave., Howard Beach, L. I., N. Y.

SELL—'34 American Austin F-R axles, hubs, spindles, springs, driveshaft. Recent brakes, KP and bushings. Ideal for TQ midget racer, best offer over $35. E. L. Stickney, 399 S. Alviso Rd., Mountain View, Calif.

SELL—One 32x4½ tire, new. $25. Model T Ford parts and completely rebuilt engine. M. H. Hollabaugh, Spencerville, Ind.

WANTED—Model T Ford touring or roadster. Engine condition not important. M. H. Hollabaugh, Spencerville, Ind.

WANTED—One or more old style Simplex curved, reducing rear view mirrors, complete with mountings. H. O. McLain, 220 S. State St., Chicago 4, Ill.

SELL—Collectors rare item—'10 Apperson Jack Rabbit five-passenger open model motorcar, four-cylinder, engine No. 2413, mechanically OK, needs 36x4 tires. C. E. Beaser, 8 S. Dearborn St., Chicago, Ill.

SELL — '31 Pierce-Arrow two-passenger sports coupe, six good tires, two are new, good paint. Photo and complete description on request. W. D. Thompson, 5200 Marlborough Dr., San Diego, Calif.

WANTED—Please help me locate parts for '08 Maxwell; low tension coil, headlights, side lights, radiator cap, tire and tube. A. W. Baarley, Des Moines, Wash.

WANTED—Information about B.L.M. car manufactured in New York City, around '05-'09. Literature catalog, pictures, or whereabouts of one for sale. J. Breese, 16 Point Beach Dr., Milford, Conn.

SELL—'39 Indian Four, police bike, in storage five years. Completely restored. Custom saddle bags and accessories. Must be seen and driven. Going to service. Sacrifice, first $300 takes it. S. Lesniak Jr., 1806 W. 18th St., Chicago 8, Ill.

WANTED—'27 Nash special six for parts. 3¼ x 4½ ohv engine in this model. Also owners manual on same. In or around San Francisco area. T. O'Rourke, 66 Maynard St., San Francisco 12, Calif.

WANTED—Exchange license plates from all states, countries, especially Utah, Oregon, Nevada, North and South Dakota, Arkansas, New Mexico, Idaho, Delaware. Will give three for one for foreign. R. Peloquin, Ballard Hill, Lancaster, Mass.

SELL—'40 Ford engine, ported, relieved, .125 overbore, Smith-Jones ⅜ cam, chopped flywheel, stock aluminum heads. Complete with starter, generator, etc. For information write D. Sheets, 340 E. Pleasant, Long Beach 5, Calif.

SELL—'23 Rolls-Royce Salamanca, conv. town car, rh drive, excellent condition. $950. Cdr. J. K. Leydon, USN, 722 Sunset Place, Albuquerque, N. Mex.

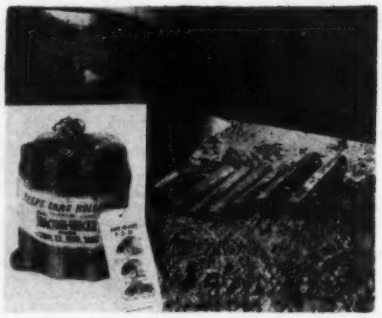
WANTED—'36 Ford V-8 roadster in good condition. No rust. Describe fully, send photograph. B. P. Douglass, Anderson Air Activities, Malden AB, Malden, Mo.

WANTED—'49-'50 Crosley Hotshot. Will pay cash or swap PT-19 airplane with radio, lights, instruments. J. Haskin, 3702 Fairfax, Dallas, Texas. JUstin 0067.

SELL OR SWAP—Late '50 MG-TD, radio, turn signals, driving lights, excellent condition, never raced. Want stock Ford V-8 in good condition. Will exchange photos. R. E. Hanf, 619 Thomas Ave., Forest Park, Ill.

TRADE TOPICS

WINTER'S WONDERLAND holds no delight for the driver who feels his wheels spin frantically in a broth of snow or mud. To obviate this seasonal hazard comes up a product known as TRACTION-TRACKS. The idea is based on a simplified version of the tractor tread. The T-Ts are constructed of heavy, durable wood. It is not necessary to attach TRACTION-TRACKS to



the wheels of the car. You merely toss them on the ground beneath, and they give the necessary traction to free your mud- or snow-bound auto. Lightweight and portable, practical and economical, this novel item (as the manufacturer points out)—"eliminates the necessity for carting ashes around in your car all winter." CONSOLIDATED EQUIPMENT CORPORATION of Cleveland, Ohio is responsible.

★ ★ ★

TO ELIMINATE THE BLIND SPOT in your driving, a smart California operator has developed the RIGHT-VIEW SAFETY MIRROR which makes it possible to see any car on your immediate right rear. This mirror will allow you to cross into that right traffic lane without the sudden embarrassment of finding another car breathing down your collar. The mirror is attractive, easily installed and just $2.00 postpaid—which in our book is a light tap for a large chunk of traffic safety. Detailed information from RIGHT-VIEW MIRROR COMPANY, 74 Southern Heights Blvd., San Rafael, California.

★ ★ ★

AND SPEAKING OF TRAFFIC SAFETY let's toss a bouquet to Pat Slater of the Bardahl Distributing Co. of Southern California. Pat, with the cooperation of the police department, has recently inaugurated a traffic safety competition in the city of San Bernardino, Calif. The format is simple. A police car assigned to the operation selects an unsuspecting competitor and follows him for several blocks, checking his driving habits and scoring them against his license number. In the course of a day quite a few candidates make their bids for recognition—all unwittingly. At the end of the week the best driver is selected, the winner haled to the police station and presented with a basket of groceries (provided by Pat and the local merchants) and a citation—the pleasant kind. Like the three progressive stages of religion: goodness out of fear of punishment; goodness in hope of reward; and finally, goodness for its own satisfaction—perhaps through such ideas as the San Bernardino plan we shall finally gain traffic religion.

★ ★ ★

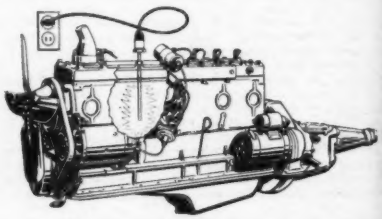
AND ALAN MOSS, who introduced the Allard out here in California, drops by to tell us about his new replaceable-cartridge MG oil filter. The filter fits all models . . . TC, TD, Y and 1¼ liter; it is a two-piece aluminum casting; it can be installed by anyone, and requires no changing of lines or fittings. The complete unit, boxed, is $15.24 which includes the excise tax. Extra cartridges are available at $2.00 each. Shipping charges are extra. Write MOSS MOTORS LTD., 4675 West Pico Blvd., Los Angeles, California.

★ ★ ★

FROM THE WINDY CITY comes a warming zephyr for those chilled, unhappy motorists who face the season of Great White Cold. It's the CRUMBLISS HIGH SPEED "SUPER" IGNITION COIL with spectacular quick-starting advantages at low voltage in those lower register brackets. The "SUPER" has special windings which produce more sparks per minute with wider setting of spark plugs. The CRUMBLISS engineers claim better idling, more power, greater speeds and marked gas savings through use of their new coil. The "SUPER" retails at $9.00, is easily installed, and is guaranteed to increase the efficiency of all high speed, high compression engines. Write CRUMBLISS MANUFACTURING COMPANY, 3011 N. Cicero Avenue, Chicago 41, Illinois.

★ ★ ★

TO CONTINUE ON THIS WINTER KICK, let's consider a hot foot for cold cars. The FREEMAN HEADBOLT ENGINE HEATER, designed for use on cars, trucks and tractors, is a 650-watt heating element which replaces an engine headbolt and extends into the engine's water jacket. Plug-in connection extends through the radiator grill; without lifting the hood the heater may be attached to an extension cord. The owner can switch it on from inside his house. In a few



minutes the engine is warm. Thus, cold-weather damage to engine parts and battery strain are eliminated. The hot water heating system starts to warm the interior of the car. Installation of the FREEMAN HEATER is simple and permanent, with no maintenance or service problem. Further information may be obtained from FIVE STAR MFG. COMPANY, East Grand Forks, Minnesota.

★ ★ ★

AN INEXPENSIVE WINDSHIELD WASHER, called the "Squeeze Me," which operates by simply squeezing a plastic bottle, has recently been placed on the market by Denton Hassell Manufacturing & Distributing Co., Ferndale 20, Mich. Fits all cars, trucks and buses . . . can be installed in approximately 2 minutes . . . no holes to drill, no tools necessary except a screwdriver . . . INSTANT ACTION washes both left and right windshields at the same time . . . nothing to wear out . . . holds enough water for one hundred washes. "Squeeze Me" sells for $1.29.

★ ★ ★

MOTORAMA P.S.—A report on MOTORAMA which you'll not find elsewhere concerns the spectacular commercial success of the various exhibitors. The MUNTZ JET company, for instance, sold ten of their fine new cars from the show floor; Peter Satori and Charles Hornburg report equally impressive successes with the Rootes cars and Jaguars. This note should be properly labeled PROOF OF THE PUDDING! Incidentally, there are no more show programs available, so get the show scoop from reading all the current TREND magazines. —**Rollin Mack**

A MUFFLER FOR EVERY CAR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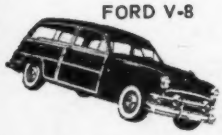

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Deep, mellow, dual tone! Straight-Thru type . . . Cuts back pressure up to 50% giving your car added power and acceleration! Saves your engine! Steel-packed, seamless steel tube construction! Won't rust out! Outlasts 3 to 5 ordinary mufflers! Easy to install, fits same space your present muffler is in!

Chev. 29-51, Ford 32-40, Ply. 31-41, Willys.....$6.86
Ford 41-51, Merc. 39-48, Olds 6 Cyl.....$7.20
Chry. 6 Cyl., DeSoto, Dodge Lafayette, Ply. 42-51, Stude. Comm., Terraplane.....$7.90
Buicks, Hudson 6 & 8 Cyl., Kaiser, Frazer Merc. 49-51, Nash, Olds 8 Cyl., Pontiac, LaSalle 34-38.....$8.28
Cadillac, Chry. 8 Cyl., Ford Mod. A. Assembly 29-31 LaSalle 39-40, Lincoln Zephyr, Continental, Cosmopolitan, Packard.....$9.15

(Note: Where no year is shown all year models are same price.)

BALANCED EXHAUST SYSTEM

by Douglass

FORD TRUCKS F1

A PERFECT FIT GUARANTEED — No cutting or welding for installation on 1935 to 1948 models or the 1949-51 Ford V-8 Cpe. or Sedan, however it is necessary to cut a hole for the left side tail pipe on the 49-51 Mercury and some 49-51 Ford convertibles and station wagons. A ***DOUGLASS*** balanced exhaust system includes one pair of headers, one pair of extensions (header to mufflers), two ***DOUGLASS*** Steel Pack Dual Tone Mufflers, left side tail pipe, all necessary gaskets, bolts, clamps and complete instructions. One of the most complete kits available. Order by year and model. For 35-51 Ford, 39-51 Merc. ***ONLY $52.50.*** Oldsmobile 88-98—1949-51 ***$74.50.*** Cadillac, Lincolns—write for complete price list. (Specify year, make, model and type of transmission.) $15.00 C.O.D. deposit on this item.

DOUGLASS DUAL SETS

For the maximum reduction of Back Pressure at low cost, you can install these mufflers without the addition of Exhaust Headers. (They may be added at any time.) All Dual Sets delivered complete with everything to install, including instructions.

35-48 Ford & Merc. $25.00
49-51 Ford & Merc. $27.50
49-51 Olds, 88 & 98.....$33.00
****37-51 Chev.** (exc. conv'ts) $48.00****
****$15.00 refund for return of old Chevrolet manifold, prepaid.**

All Douglass Mufflers and Balanced Exhaust systems are guaranteed to be made from the finest materials possible, using highly skilled muffler craftsmen and engineers. Money back guarantee. If not satisfied, return within 10 days and full purchase price will be refunded. Send Check or Money Order.
C.O.D.'s $2.00 deposit on singles, $15.00 on duals. Specify year and model. For Additional Info. Write Today.

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Please send at once
☐ Douglass "Steel Packed" muffler ☐ Douglass Dual Set
☐ Douglass Balanced Exhaust System

_____
SPECIFY YEAR, MAKE & MODEL OF CAR

_____
TYPE OF TRANSMISSION

☐ Check or money order in full, enclosed
☐ C.O.D. Deposit for $_____. Balance to be paid on delivery.

Name_____

Street Address_____

City_____ Zone_____ State_____

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